

THE CULTIVATOR.

THIRD

To Improve the Soil and the Mind.

SERIES

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PRICE FIFTY CENTS A YEAR.

THE CULTIVATOR has been published twenty-five years. A NEW SERIES was commenced in 1853, and the six volumes for 1853, 4, 5, 6, 7 and 8, can be furnished, bound and post-paid, at \$1.00 each.

The same publishers issue "THE COUNTRY GENTLEMAN," a weekly Agricultural Journal of 16 quarto pages, making two vols. yearly of 416 pages, at \$2.00 a year. They also publish

THE ILLUSTRATED ANNUAL REGISTER OF RURAL AFFAIRS—144 pp. 12 mo.—price 25 cents—\$2.00 per dozen. This work was commenced in 1855, and the nos. for 1855, '56 and '57, have been issued in a beautiful volume, under the title of "RURAL AFFAIRS,"—containing 440 engravings of Houses, Barns, Out-Houses, Animals, Implements, Fruits, &c.—price \$1.00—sent by mail post-paid.

Appropriate Notes.

NOT TOO LATE TO BEGIN.—As opportunities recur during the whole winter and spring, it is hoped the friends of the CULTIVATOR will use their influence to extend its circulation. All subscriptions begin with January, and we supply the back numbers in any desired quantity. There are many single subscribers (one at a Post-office) now on our books, and if not only they, but also those who are already members of clubs, will think over the list of their neighbors, we are confident they could each find a dozen or a score of those who as yet are taking no Agricultural paper, and whose names could be procured by a little effort for the CULTIVATOR.

ADDITIONS TO CLUBS ARE SENT AT CLUB RATES.—Clubs need not all go in one name or to one Post-office, but each copy will be sent to any desired address. Those who have undertaken to form clubs need not wait, if their subscribers are in haste to receive the paper, until the full number is completed, but may send on, upon club terms, and we will trust to the future for the completion of their lists. We say this because it sometimes happens that where four or six or eight subscribers are obtained, the effort to procure the others is put off until the interest in the matter abates, and finally those who really want the paper are disappointed.

OUR CONTENTS—NUMBERS FOR DISTRIBUTION.—The present as well as the January number of the Cultivator, is among the best ever issued, as far as range and variety of contents is concerned, and we call particular attention to the number of farmers whose practical experience is here given from their own pens and in their own language. We should like to send any desired quantity of the January and February numbers for ex-

amination by those who would read and appreciate them, and we shall be much obliged to any of our friends who will either send lists of names to whom we may mail samples, or who will undertake to distribute a few copies themselves.

THE ANNUAL REGISTER.—The inducement given to clubs, by the offer of this work, is no small one. Containing engravings which have cost us several hundred dollars, it also has been uniformly commended as really a standard work on every point of which it treats. Says the *New-York Tribune*: "The best treatise we have anywhere seen on the subject of Draining, is found in the *Annual Register* for 1859," and the same article received the highest public tokens of approval at the Annual Meeting of the Ohio State Board of Agriculture, and on several other similar occasions.

THE SALE OF THE RDGISTER.—There is perhaps scarcely a neighborhood in which, even if a club for the *Cultivator* and *Register* could not be made up, a dozen copies of the latter might not easily be sold. It retails for 25 cents per copy, but we send a dozen copies post-paid for \$2! And we should be much obliged to those who, if they cannot undertake to dispose of a dozen or two themselves, would induce the postmaster, the store-keeper, or some other party, to send for a quantity to sell as above.

BACK VOLUMES OF THE CULTIVATOR.—We now offer for sale Complete Sets of the Third Series, comprising the six years, 1853-54-55-56-57 and '58, handsomely bound in Muslin gilt, and sent by Express to any part of the country for only \$4.50. The price by mail, post-paid, is \$1 per volume. Each is furnished with a full index, enabling the inquirer to turn to more or less that is suggestive and useful on almost any subject that may come up in connection with Rural Pursuits.

Terms of Cultivator and Register for 1859.

One copy Cultivator and Register,...	75 cents.
One copy Cultivator alone,	50 cents.
Ten copies Cultivator and Register,..	\$5 20

N. B. Subscribers in the British Provinces will add 6 cents a copy to the above terms, to cover U. S. postage to the lines. To them 10 copies of THE CULTIVATOR and REGISTER will cost \$5 80.

Premiums to Agents..

1. *We will give a copy of THE CULTIVATOR and REGISTER for 1859, FREE to every one who sends us \$5 for a club of Ten subscribers, and the postage (22 cents,) which we have to pay on the Eleven Registers.*
2. *We will give a copy of either THOMAS' FRUIT CULTURIST, THOMAS' FARM IMPLEMENTS, the bound volume of RURAL AFFAIRS, a previous bound vol. of THE CULTIVATOR, or any other \$1 book, to the one sending us \$10 for Twenty copies CULTIVATOR and REGISTER for 1859, and 40 cents to meet the postage on the 20 Registers.*

Manure of Fattening Swine.

In an article on "Fattening Swine," some weeks ago, (Co. Gent. Oct. 21, 1858,) we suggested as subjects for future discussion—the rearing and management of pigs—preparation of food for fattening and feeding—the arrangement of pens—the management of the manure produced—also those recently made the subject of communications from "B. F." viz: "Proper Age of Fattening Swine," (Co. Gent., Nov. 18, 1858,) and "Wintering Pigs," in the number of the succeeding week. We hope these and other topics named will receive the attention of correspondents. We shall meanwhile offer some hints on the best management of the manure of fattening swine.

"Pig's dung," says Johnston, is still colder and less fermentable than that of the cow. * * * It is best employed in a state of mixture with the other manures of the farm-yard." "It does not," says Browne, "ferment and mellow as well in the earth, when used alone, as when mixed with the dung of cattle and horses, and it is so rich and stimulating that it is difficult to spread it thin enough when applied by itself." Those who would learn its value as shown by chemical analysis, and compared with other manures, are referred to the Cultivator for 1850, p. 198, where will be found full information from Prof. J. H. Salisbury in regard to the same.

From its unfermentable character, hog manure suffers little loss during cold weather, however managed, unless exposed to long washing by rains. In the spring, however, it will be found poorly fitted for application to the soil—remaining a cold, saponaceous mass, not readily mixed with the soil. We have found a good practical result to follow mixing the manure from the hog pen, where swine were fattening, directly with that from the horse stable, the rapidly fermenting character of the latter reducing by spring the former to a proper state for use. The cobs of the corn used for the last month's feeding our pork, became well rotted, and the horse dung, though in heap, did not fire-fang or burn, as it would have done without this mixture.

Hogs when fattening should not be expected to work at compost making—they ought to get sufficient exercise in eating, to be willing to rest the remainder of the time; and reason would teach us that their manure is not as valuable for composting with "muck, leaves, turf and other vegetable refuse," as manures of a warmer character. Store swine might be allowed this sort of exercise, especially when the dung of horses and cattle are to be mixed with the absorbents above named, and would accomplish a good work at composting, all the better if any grain was to be found in the mass, either having passed undigested through the stock, or having been thrown in for the purpose of inducing the swine to root for it.

For reasons before stated, we would either compost hog and horse manure together, or remove both to the barn-yard, making that the common receptacle of all the manurial substances within our reach, (save, perhaps, hen dung and night-soil, which could be more economically employed by other methods of management.) The latter would be the best course, but if convenient in any instance, we would at some time during the winter, pile the hog manure in thin layers, with an equal amount of horse dung between each, and a covering of earth or muck over the whole. This would secure decomposition without loss, and furnish a quantity of fertilizing mate-

rial of excellent character for application to spring crops—corn or roots for instance. The labor bestowed in this way would be well repaid, and a large saving result over the usual wasteful method of allowing it to remain under the eaves of the hog-pen, to be washed by rains, or to be scattered far and wide by pigs running at large as is too often the case.

Winter Care of Farm Stock.

In most sections of the country there was an average crop of hay, but as a general thing over large districts the oat crop was either a failure or a very light crop. Over a large portion of the Northern States the foddering season for young stock and sheep this autumn commenced about one month earlier than it did last year. Should we have a very cold winter and late spring, in all probability hay in many sections will be 'scarce and dear' before the cattle can be turned off to pasture. In anticipation of such an event, it becomes all who have the care of stock to use strict economy in feeding—but by economy we do not mean half-starving the stock for the purpose of having hay for sale when it commands a high price. If the hay is of poor quality, it should be fed a little at a time and often, or mixed with corn fodder or a small portion of good hay; occasionally it should be sprinkled with brine. If a small portion of finely chopped apples, potatoes, roots or cabbage is mixed with hay of poor quality, it somehow seems to give it a seasoning, and they will much more freely eat it than if given alone. It is a miserable business to compel farm stock to feed wholly on poor hay all the early part of the winter; they will thus lose flesh and get down poor, and the best of English hay given through March and April, will not fully restore the lost muscle and fat. Self-interest should prompt the farmer so to keep his stock that they should go to pasture in as good, if not better condition than when they came to the barn.

List of Fruits for the West.

Will you please furnish a list of fruits suitable for a farm of 80 or 100 acres, to afford a full family supply, and a proper succession extending the circle of fruits throughout the year, and adapted to our climate? A. G. H. Waukesha, Wis.

It is difficult to give a precise list, as in some seasons the crop will be ten times as great in some years as others; and again some will bear abundantly and others fail in the same season. The following however, will serve as an attempt or approximation:

EARLY SUMMER.—Early Scarlet, Wilson's Albany, and Hooker strawberries—two or three square rods, well cultivated in drills.

EARLY AND MID-SUMMER AND LATER.—Red and White Dutch currant, Cherry, White Grape, and May's Victoria, one to two dozen bushes each; two dozen Houghton's gooseberry; Fastolff and Franconia raspberries, one dozen or more each, and three dozen Brinley's Orange, all to be laid down in winter; three trees Mayduke cherry, three of Early Richmond, one of Belle de Choisy, and four of Belle Magnifique; a dozen each of Dorchester and Rochelle blackberries.

LATE SUMMER.—Red Astrachan, Sops of Wine, Carolina Red June, High-top Sweeting, Early Joe, Benoni, Sweet June apples, each two trees; Tyson, Rostiezer, Osband, and Brandywine pears, each two trees. Some currants and blackberries will continue till this time.

AUTUMN.--Oldenburgh, Late Strawberry, Fall Orange, Dyer, Gabriel, Maiden's Blush, and St. Lawrence apples, each three trees; Flemish Beauty, Buffum, Fulton, Onondaga, and Stevens' Genesee, each two trees; the two first being very hardy, might be planted in greater numbers. If *dwarfs* are desired, for coming soon into bearing, they may be of the following sorts, which are among the hardest at the west, and which do well as dwarfs;--Buffum, Osband's Summer, Oswego Beurre, Tyson, White Doyenne—and Glout Morceau and Easter Beurré for winter,—three to six each—more of the two last. The Delaware, Clinton, and York Madeira grapes,—two to six vines each—the Delaware is the most valuable.

WINTER AND SPRING.—*Westfield Seekno further*, Jonathan, Fameuse, *Yellow Bellflower*, Winesap, *White Winter Pearmain*, and Mother apples, each five sorts, except those in italics, of which there may be ten each.

Those living at the west, who may be well acquainted with those fruits which do best there, may add to or modify the list.

Extracts from a European Letter.

[We make the following interesting extracts from a private letter to one of the Editors of the Co. GENT., under date of Paris, Dec. 12, 1858.]

"We have made a short trip to Germany, and I had the advantage of looking at the country in a more agricultural point of view than ever before, and of noticing the preparations for winter by the farmers. We visited Cologne, Gottingen, Berlin, Dresden, Frankfort, Heidelberg and Strasburg, and found the weather colder than when we left here, and snow upon the ground in several places. Indeed the season seemed almost as chilly as it could be with us, though the ground was little frozen, and plowing was going on. Quite frequently we saw in the southern part of Germany, and in France, green crops starting from the ground. The country is very highly cultivated everywhere, but with immense labor, and with less results than we should expect. In general, the implements are of the most old fashioned sorts, and the tillage too, nor are the animals so fine as one would expect.

"I should think that agriculture in France was far in advance of that of Germany. We rode through a magnificent wine country in coming from Strasburg here, and noticed the exceedingly careful cultivation here. It is a striking feature of the country to an American, every where in Europe, you know,—the *want of fences*. But in some parts of France much land is wasted in ditches and hedges as boundaries. This is better regulated in Germany, where in many parts by the association of landholders for the consolidation and redivision pro rata of value, each property is made snug and compact, and, where the divisions are marked by boundary stones simply, great advantages have been obtained.

"The cheapness of labor and the necessity of providing it, in connection with the evil influence of the monopolies held or farmed out by government, together with the influence of old customs and prejudices, hold all practical and scientific progress rather in check as compared with our country.

"Everybody I think must wonder over and admire the fertility and natural advantages of France. I had an opportunity especially of noticing this last summer in Normandy, where not only the luxuriance of the crops was astonishing, but we saw often the most fertile country reaching down to the very brink of the sea, so that I remember our room in the little house where we were had one window on the bare sea beach, and the other on the richest wheat and best fields that I had in a long

time seen. The really fine horses one sees here in Paris, you know, come from Normandy. The draft horses everywhere here seem good; magnificent stallions do all the heavy work, and seem to make but sport of the heavy drays and omnibuses. The traveller by hired carriages is never troubled here with the sight of such miserable skeletons of hacks, as are often appropriated for this work with us. For the lighter carriages they have a sort of pony, perhaps about 12 hands high, which seems to keep as fat and well in its work as the omnibus stallions in theirs; and so, everywhere here, you notice that particular breeds are kept for particular purposes.

"The carriage horses and pleasure horses of every kind however, as well as the horse of all work, do not seem to compare well at all with our own, so that it is the common exclamation of Americans on the Promenades here, 'What miserable horses!' although they are driven in all the style and more too, than is their due. Draft stallions reach often 1,500 francs and over, and fine carriage horses command still larger prices.

"Of the keep of horses here I of course know little, but I think it consists much less of unmixed grain than with us, but rather of prepared food.

"Both the French and Germans seem to me, and I believe to all Americans, to be miserable horsemen, and for their use what we should consider an overtraining of the horse seems necessary. The best riders and drivers, as well as horses, seen on the continent, are from England. In fact it is the superlative qualification of a pleasure horse to say that it is 'English.' This, wherever you see it, shows in splendid contrast to the eye of a horseman, by its quiet action—with a neat trot skimming the surface of the ground, in comparison with the pawing and sprawling action apparently admired here. His delicate head and limbs, too, point out a different stock. The Royal houses cultivate everywhere in their studs, I believe, the English stock, or one similar to it. I have been told, however, that the province of Calvados made the Emperor—who is said to be a good judge of horseflesh, on the occasion lately of his visit there,—a present of twelve horses for his own stables, and there are several studs in Normandy, where the stock is said to be very fine, but what it is I don't know.

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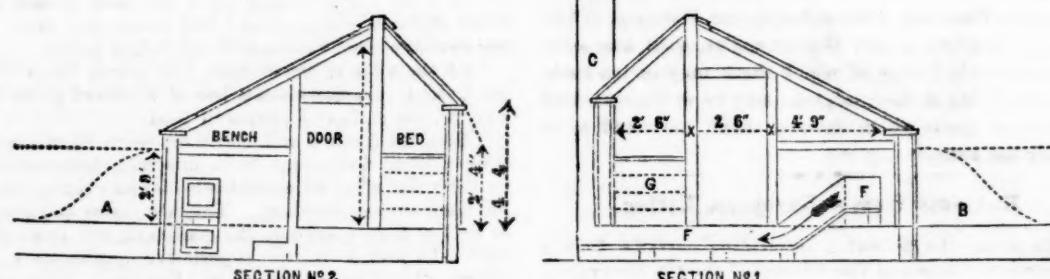
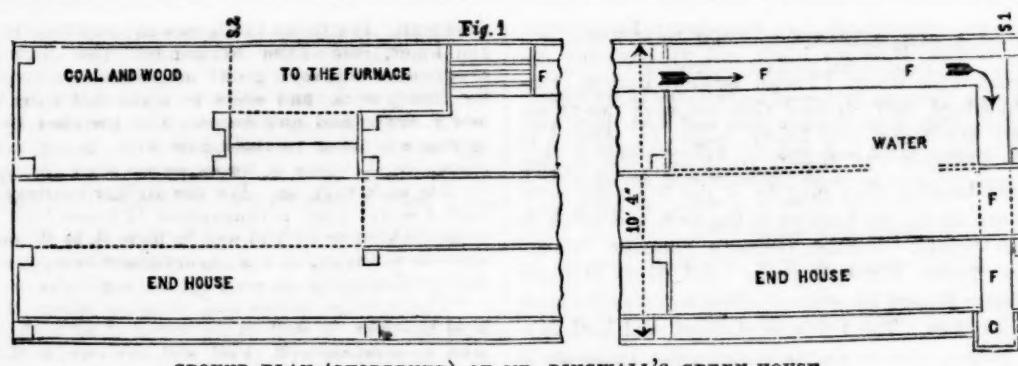
"The weather here is yet quite mild; one does not often see ice, but fogs surround us continually almost, and we have rarely a really pleasant day. The charity balls, of which much is made, are beginning now, and soon the Carnival will be upon us with all its sights and pleasures. W. P. P."

Cheap Underdraining.

ROBERT B. HOWLAND of Union Springs, N. Y., whose farm of several hundred acres is a hard clayey soil, with hard-pan subsoil, undertook at our recommendation, three miles of drain, which he commenced during the past month after winter had set in, and the ground had become frozen, using the "subsoil loosener" recently advertised in this paper. Before the close of the month he had completed the whole to a depth of three feet. Although the cold was occasionally quite intense, yet by keeping the surface of the earth in the ditches broken up and mellow over night, there was no freezing to produce any inconvenience. Indeed, he found an advantage in a frozen surface, by giving a firmer path for the horses. After a ditch is cut a foot deep, it requires very severe cold to freeze the earth in the bottom—that which is intense enough to form a crust three inches thick at the surface, will scarcely affect it. The cost per rod of the three miles of drain, varied from ten to twelve cents, but was mostly about ten cents—the depth, as before stated, being three feet, and the soil hard and tenacious. Tubular tile was used for the channels.

* * *

Good CROPS.—G. M. Atwater, Esq., of Springfield, Mass., has raised 96 bushels of "King Philip" corn on an acre of ground the past summer, and last year sold 29,600 pounds of carrots from an acre



[We have had engraved to save space, but a part of the working drawings furnished us—which, however, with the accompanying detailed description, will, we think, answer every purpose.]

Fig. 1 represents a ground plan, drawn upon a scale of a quarter inch to 2 feet—except that of course the length is diminished by taking out a portion of the drawing in the center between the crooked lines, the parallel lines that are there cut off having only to be extended to their proper length, in order to give the whole plan upon an exact scale.

The extreme length of the whole is 124 feet—its width from outside to outside 10 feet 4 inches. At the ends are two divisions, as will be noticed, each just 12 feet long, used for other purposes—the length of glass framing being in full exactly 100 feet between these two ends.

At the lower end (on the left) is the furnace, with accommodations for fuel and some spare space for other purposes. Section 2 shows the arrangement here—the section being taken where marked (s. 2) on the around plan.

The flue leaves the furnace, passing along the floor, as shown in the ground plan at ffffff—out at the chimney (c) in the lower right hand corner. This flue is laid on iron plates 3 feet long, 1 wide, and 3-16ths or one-quarter inch thick, which are cheaper than bricks and answer

admirably their purpose. (Iron must not, however, be used for the top of a flue.) The plates are raised up two and a-half inches upon bricks laid under the ends of every two plates—the intervals allowing of the free circulation of air beneath the greater part of the flue.

At the right end of the ground plan will be noticed s. 1—here section 1 is taken—which latter shows at ff how the flue is carried down beneath the path, across the house and up the chimney (c).

The space marked in section 1, 4 ft. 9 in. wide, shows how the bench or stand passes above the flue; it contains 4 inches of sand for plants. The path, extending the whole length of the house, is 2 ft. 6 in. wide, and there are 2 ft. 6 in. more on the other side of this passage, the earth from which (at G,) if the surface level is at its top, need not be excavated, and only its top fitted as a bed or stand for plants; or if the surface level is below, this space had better be filled in with earth to the requisite height (2 ft. 4 in.) and the earth also made up in front of the building to the height and in the manner shown at A and B in the two sections.

The twelve feet constituting an end house at the upper end, are used for water as marked, and above for shelves for pots, potting bench, &c., while both this and the end house below serve as storm doors to the interior.

The front sashes are 8 feet long by 4 wide, and the back sashes 4 feet long and 4 wide.—EDS. CO. GENT.

Green-Houses on the Ascending Principle.

MESSRS. EDITORS—The merit of originating the construction of green-houses on the ascending plan, is due to Mr. JOHN DINGWALL, florist, of Albany, who well deserves the thanks of the fraternity and others for his valuable discovery.

In situations where the nature of the ground is favorable, its economy and efficiency will be found most obvious. The degree of ascent best adapted, seems to be a rise of 10 feet in 100, but a foot or two less or more would not materially affect the principle of the equal distribution of heat from the flue, which is the whole feature of this discovery.

The accompanying plan of a green-house erected by Mr. DINGWALL last fall, and which, he informs me, worked admirably during the coldest weather of last winter, will best convey an idea of the value of this method.

It will be observed that the unusual length of the green-house and sheds—124 feet by 10 in width, is all equally heated by one furnace and one run of flue—a

result which would never occur if the house was built on a level. A difficulty always felt by us in heating by flues in long narrow houses where it is inconvenient to have more than one run of flue, has always been, that at the one end the plants are scorched up by the heat given out around the furnace, while at the other they are chilled or frozen, and this too, often when the length of house does not exceed 60 feet.

Through the representations of Mr. DINGWALL, I was induced for the sake of experiment, to get up a forcing pit or green-house this fall on the "ascending" plan, and am much pleased with the result. My house is only 70 feet—all the length the ground would admit of; and when heated by a small flue and tested by the thermometer. I find that what we have always heretofore known as the "cold end," is 28 higher than at the furnace.

I am of opinion that green-houses constructed on this plan will effect a saving of one-half in fuel, and by giving a uniform temperature throughout, will of course vastly benefit the plants. PETER HENDERSON.

New and Profitable Crops to Raise.

WELD OR DYER'S WEED.

MESSRS. TUCKER & SON—You inserted in your number of 8th April last, a new and very profitable crop to raise, that I sent you. I will continue to suggest other profitable crops. The one of which I shall treat now is the *Weld or Dyer's Weed*, which produces a splendid fast yellow color. We are in the habit here of substituting quercitron bark to produce an imitation of the yellow color produced by Weld, but it does not give such a good color, and is not so profitable.

The *Weld*, (*Reseda luteola*) is of the *Reseda* genera, brother and sister to the *Mignonette*, which every lady knows who keeps a garden. It is an imperfect biennial, with small fusiform roots and stem from 1 to 2½ feet high.

Weld is extensively cultivated in England, France and Germany, for dying, for which its flowers, its leaves, its stem and the roots furnish a lemon yellow color, handsome, solid and very advantageous for all kinds of silk, cotton, linen, mohair and woolen goods, far superior to the color of the oak or other barks. Of all tinctorial plants, it offers the cultivator the

great advantage that it has only to be pulled up, roots, stem and all, and dried, to be delivered to the dyer. The same yellow color serves for painting also, for the Dutch pink is made from it.

Weld is a very hardy plant, and flourishes in all kinds of soils; but fertile soils produce more abundantly. Warm, dry, sandy soils produce more coloring matter; but Weld must be put in clean ground, as its infancy is long and consequently has then to be weeded. Another great advantage of it is, that it requires no manure.

Weld is sown in July or August. It can be sown in another crop already established, either beans, Indian corn—even among wheat and clover, in which case it requires no special previous cultivation, sowing it after the last cleaning of corn or beans, among which it will do best, and admit later, or the second year, to be weeded by the cultivator.

It is harvested in July of next year, when it is in full length, and in bloom, and begins to turn a light yellow color, by merely pulling up the whole plant, and it is done in time to put in a crop of ruts bagas or white turnips, or other late crops, grain, &c. In pulling, put them up in small shocks, so as thoroughly to dry by the sun and dew. A week or less will thoroughly dry it. Keep it from rains. When it is dried, tie it up in bundles of 10 or 12 lbs., on canvass, so as not to lose the seed, which also furnishes a good oil to burn. It can be kept a number of years without altering its coloring qualities; hence its great value, provided it has been well dried—dried if possible in such a way as to retain part of its green color, although that is of no very great consequence.

The produce of Weld depends a great deal on circumstances, but the cultivation of it being so very inexpensive, the profits of it are sometimes very important. An acre may produce from 80 to 120 bundles, worth from 50 to 75 cents, sometimes more.

As it requires only sowing, preferably in rows one or two feet wide, so as to admit the horse-hoe when



WELD.

young principally, and then rolling the seed, they can stand six inches in the row, or even closer. In this way about one and a half pounds may sow an acre if sown by a drill, or as the seeds are very fine, by the thumb and finger a man may sow one or two acres a day. F. A. NAUTS. Near Winslow, N. J.

How Much Stock to the 100 Acres?

EDS. CO. GENT.—I notice in your issue of the 16th Dec., "A Reader of the Cultivator," desires to know "how much stock may be kept on every 100 Acres." I have been led to make the same inquiries, and by like observations, viz., that our grain-growing system was very exhausting, our lands rapidly deteriorating, and a change was requisite to prevent their becoming worthless barrens. Farming has not been the chief employment of my life, and I have been wholly occupied with other pursuits since 1842, until the spring of 1857, when I assumed the labors of farming, and desire to make some progress in improving that department of industry.

The farm I occupy, (75 acres) furnished 25 loads manure in the spring of 1857—all that the consumed crops of the farm produced. I added 75 acres to the farm, and my crop of manure last spring, made on the farm, was 300 loads, and 200 purchased and hauled from town, made 500 loads applied last spring.

I am wintering now the following stock: 10 Short-Horn bulls—12 Short-Horn cows—9 grade Short-Horn and Devon cows—8 yearling Short-Horn heifers—2 yearling Devon heifers—4 yearling grade Short-Horn heifers—18 Short-Horn, Devon and grade calves—5 horses—3 sheep and 4 hogs. I have fodder, roots and grain enough to carry this stock in good condition through a six months winter, and they are making me a fine quantity of manure, to which I shall add by leaves from the forest, muck from the pond, and purchased manure from town, until I have 1000 loads for next year's use, which I trust will enable me to summer and winter still larger herd of cattle, and larger still each successive year, until I keep 225 head, which is the number of acres I shall have in cultivation in future—or one head to the acre, which is the answer I have given to the question we start with. It is true that my neighbors laugh at me for embracing the absurd idea that one cow, (for it will average equal to one cow, taking old and young, of a breeding and dairy herd,) to the acre, can be sustained summer and winter, and assure me as you do, that it will require three or four acres to the head. That laugh, however, is not satisfactory evidence to me, and I shall seek better evidence in a trial of the experiment.

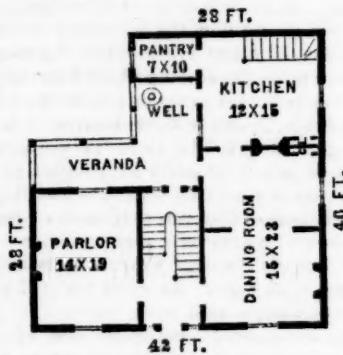
At present I am not prepared to tell how it is to be done, but I will find out and tell you at some future time.

The crops that I shall mainly rely on, besides the hay crop, are corn, rye to cut green, Hungarian grass, broadcast corn, and roots. I have great confidence in corn as a main crop. I believe I can average 75 bush. shelled corn to the acre, and 4 tons of cured fodder; and this quantity, given to two head through a winter of six months, would give each 22 lbs. stalks and 6 quarts corn meal per day. I find I can sow rye early in the fall, pasture calves and young stock upon it a month before winter sets in, then cut 5 to 10 tons of green food by 10th June, and vacate the ground in time for a crop of broadcast corn or Hungarian grass, either of which will produce several tons of fodder per acre of best quality, or green food for August and September, when pastures are dried up. The cattle must have their food cut and carried to them in the main, so as to prevent waste in trampling down the grass and in the manure. The liquid manure must be husbanded, and applied to the soil as carefully as the solid droppings.

Such are the views that I commence the experiment with, and I am glad to learn that others are looking in the same direction for improvement. I hope "A Reader of the Cultivator" will furnish your excellent journal with the results of his experiments and his name. I should also be glad to learn from those having experience in the matter, what crops will produce the largest amount of food for summer feeding stock, at least expense of seed, labor, &c. E. CORNELL. Ithaca.

Plan of a House.

Wm. G. WOLF of Beaver, Pa., has furnished the accompanying plan, the principal object, next to convenience, being to secure a thorough circulation of the air through every apartment by means of the windows. This appears to be well effected, every room having openings on its opposite sides. It is effected, however, at the cost of material, there being the same amount of outside wall as if the whole structure were square, and enclosing at least one more good room, which might be a bed-room or nursery—or two rooms, if a part of the veranda were dispensed with. Those about to build can choose between more space, or free circulation. The latter would be most valuable in warm sheltered places, and least so on bleak hills.



The chief defect in the plan as furnished, is the want of a lodging room on the first floor, and of a pantry or dish closet opening into both kitchen and dining-room. The last named deficiency may be obviated by converting the present pantry into a store-room, and enlarging the two small closets beside the chimney as much as practicable, to serve as a pantry or dish closet.

The house is intended to be two stories high, each 10 ft. (but on a hill 9 ft. would be enough, being a colder situation,) and the cellar 8 ft.

Value of Carrots.

What is done on a small scale, *with ordinary means*, may be done by the acre. On a square rod of land, occupied for the second year only, as a garden, and consequently well manured, we raised this year nine bushels of carrots—or at the rate of more than fourteen hundred bushels per acre. We could easily select entire acres of land, and by applying sixty loads of manure per acre, at two dressings, easily do the same again. Did any one ever fully appreciate the value of a single bushel of carrots to a cow giving milk and making butter in winter? If so, such a one may understand the benefit which might result to a herd of 20 cows, the whole of which might receive a half bushel per day each all winter from a crop of 1,400 bushels. If worth 25 cents per bushel in saving hay, improving condition, and increasing milk and butter, the whole crop would

be worth 350 dollars. Yet the cost of raising need not be a hundred dollars, at ordinary prices of manure in most localities. "High farming" in some matters will not pay, but it will eminently do so in this; and one of the great points of skill in successful farmers, is to know when it will, and when it will not.

Soiling Cattle.

MESSRS. EDITORS—I am engaged in supplying milk for the Boston market, and intend next summer practicing soiling to some extent. In the neighborhood of cities, farming land is too valuable to be used for pasture, and the soiling system must gradually be introduced.

I should be glad to see in your paper any suggestions as to crops adapted to that purpose, particularly for early cutting, before green corn is sufficiently grown.

Vetches is a crop grown very much in England for soiling purposes, and is very highly esteemed both for increasing the yield of milk and for its butter-producing qualities. This has been tried to a evry limited extent in this country, but if the climate is adapted to it, I think it might be found a profitable crop, both for cutting green and curing for winter fodder. If you can give your readers any details as to its cultivation and success where tried, I think it would be acceptable to them.

If this subject of "soiling" should be discussed in your columns, much information might be elicited of practical advantage to dairy farmers. E. R. A. West Roxbury, Mass.

Our correspondent will find on another page of this paper, a letter from Mr. CORNELL, showing what he has done, and proposes to do in the way of soiling cattle; and we shall be greatly obliged to any of our readers who can furnish any facts on this subject, which is every year becoming a matter of more and more importance, not only to farmers residing near cities, but to all whose exhausted soils require more manure than can otherwise be made, to bring them into a state of profitable culture.

Superior Beef.

MESSRS. L. TUCKER & SON—We have on our stalls, Nos. 3, 4, 5, 6 and 7, Center Market, Albany, the beef of the prize heifer that was exhibited at the State Fair, which is pronounced to be the best carcass of beef of the weight ever seen in this city. The following is the live weight, and also the weight of dressed beef:

Live weight, 1,780 lbs., two days before killed.	
Open fore-quarter,	320 lbs.
Close "	315 "
Open hind-quarter,	271 "
Close "	260 "
	1,186 "

This is 664 lbs to the hundred.

This heifer was about half Durham, and half Mountain or Scrub, as called in Kentucky.

We have also the beef of a thorough-bred Durham cow, whose hind-quarters surpass any thing in point of fatness ever seen—the average thickness of fat from the butt of the tail to the end of the loin, is 4½ inches. The live weight of this cow was 1,626 lbs.

Open hind-quarter,	275 lbs.
Close "	265 "
Open fore-quarter,	261 "
Close "	261 "
	1,062 "

This is 65½ to the hundred.—CHARLES & VAN METER. Center Market, Dec. 27, 1858.

PENNSYLVANIA.—"I do not know ANY BETTER WAY TO ADVANCE THE INTERESTS OF OUR SOCIETY, than to induce our members to read the COUNTRY GENTLEMAN." J. L. D.

Corn Culture in Massachusetts.

MESSRS L. TUCKER & SON—I enclose you some statements of corn crops, which you are at liberty to use as you think best.

Mr. DAVID R. WAIT of Deerfield, one of our wealthiest and best farmers, who now owns the magnificent farm formerly owned and named "Meadow Bank," by the late HENRY COLMAN, has this year raised a crop of corn, of 117 bushels to the acre. The land is rich bottom land—three acres—green sward in 1854—to corn in 1855—oats in 1856—corn in 1857. The past spring, early in May, 16 loads barn-yard manure to the acre, were hauled, spread, and plowed under 10 inches deep. The corn, which is the Dutton or 12 rowed variety, was planted three feet by four, with a corn planting machine, which dropped plaster and ashes in the hill at the same time. A peck of seed was used to the acre.

It was "cultivated" with a horse, and hoed three times, keeping the ground as level as possible. The top stalks were cut in September, and the corn harvested October 18 to 23. It was in excellent condition, and the corn from the three acres was picked, husked, and measured, and also weighed. It measured 329 bushels 17 quarts, or at the rate of 109 bushels and 27 quarts to the acre. By weight, the legal standard in Massachusetts, there were 117½ bushels to the acre. It was shelled and dried before measuring, but of course will shrink some. It however, is now worth at his crib,

90 cents, which would give, \$317.75

6 tons fodder at \$5 per ton, 30.00

And as the product of the three acres, \$347.75

The expenses were reckoned as follows:

Plowing and harrowing \$5 50—seed 75c,	\$6.25
48 loads manure hauled and spread, at \$1.25,	60.00
Plaster and ashes,	5.00
Planting with machine,	1.50
Cultivating three times,	3.00
Hoeing three times,	11.00
Harvesting,	25.00

Total expense—leaving the unexpended manure to offset interest on land, \$111.75

Leaving a net profit of \$78.66 per acre, and the land better than before the crop was put in. The corn every where in this section is uncommonly fine.

On one acre and three-quarters of land—in corn last year—we this year raised 170 bushels and 18 quarts, or at the rate of 97 bushels and 4 quarts to the acre. Ours was the eight-rowed Connecticut river corn, early and sure—13 loads of green manure plowed in, and 13 loads of compost, dropped in hills, to the acre. The corn was planted by hand, May 1, 3½ feet each way—cultivated and hoed three times—ashed at first hoeing. The corn was topped Sept. 15, and harvested Oct. 15. It was very dry and in good order. The committee who viewed it, pronounced it the handsomest piece of corn they had ever seen. There was not one quart of soft corn on the whole acre and three-quarters, and almost every ear was filled out clear over the end of the cob.

The top stalks we always cure carefully, and spread a little salt over when packed in the barn and sheds. When fed out, they are always cut, as is everything in the way of litter, so that we have no long manure to get out in the spring.

Our compost is made of muck, of which, every fall, some 75 loads are carted into the yards and under the sheds, the manure always being under cover.

We have three tons of top stalks, worth \$5 per ton; deducting these from the whole expense of the crop, (\$81.00) shows the cost of the corn to have been about 38 cents per bushel, which is rather below the average cost of corn here.

The corn that we raise here is very heavy, and makes a very rich and nutritious meal. JAMES S. GRENNELL Greenfield, Mass.

Cost of Growing Oats.

MESSRS. EDITORS—In one of the late numbers of the COUNTRY GENTLEMAN, (Nov. 11, 1858,) I gave you some details with regard to the expense and profits of the corn crop in this section of the country, taking my own experience as the guide.

As the oat crop is the next in importance, of all the cereals we grow here, since wheat and barley have become so uncertain, I have thought it might not be out of place to look a little into the expense and profits of this item of farm account. I think it is conceded by every practical farmer, that it is an exhausting crop, and requires a strong soil to be highly remunerative. It is also objected to as a crop unfavorable to the seeding with grass at the time of sowing the oats; but this objection is not serious, if the soil is really in a good state of cultivation, and not too much of the oat and too little of the grass seed used in the seeding. It is not so desirable a crop for seeding down to grass with as rye, wheat or barley, as the straw is more apt to fall over and smother the young grass, particularly where the oats are sown bountifully on a rich soil. On such soils I would never sow over two bushels to the acre. I would rather sow less than this quantity than over; but the grass seeding should be liberal.

This crop is a desirable one with us, on account of its certainty. It never fails, though it is better some seasons than others. In order to insure a good crop, it should be got in as early as possible in the spring; thus fall plowing for the crop becomes important, and deep culture also, that the crop may withstand the test of any severe drouth of early summer. In an experience of the last twenty years I have never failed of a fair crop, and a good catch of the grass seed by the practice here suggested.

The light seeding and early sowing, enables the straw to expand and get a strong vigorous growth that will hold up a heavy ear, and if it does, under a gale of wind and rain, fall over, it does not lay flat and prostrate—only partially lodged, and generally not until the ears or heads are filled out with the kernel. Such a phenomenon as a total failure of the oat crop in Vermont, or in New-England, was never known, or at least I have never read or heard of any such account. In 1816 we lost the corn crop, but all the small grains were good.

Here amidst the green hills and valleys, and sterile mountains of Vermont, where we have six months winter, where seed-time and harvest, though sure to come, crowd upon each other so closely as to tax our energies to the utmost, we can scarcely conceive or comprehend how it is, or why it is, that the virgin soil of the famous prairies of the West should report this hardy crop "a total failure." It is always a matter of regret to the whole country that any of the necessary fruits of the earth should be cut off; but New-England, with the rest of this northern world, can furnish the oats this year, for the crop here was never better. It may have a tendency to render us more contented with our lot and in less haste to emigrate, when we read accounts from this fruitful and highly productive land, that "wheat is but half a crop, corn about two-thirds, oats an entire failure, barley but little grown." It almost makes us say, "we desire no change, and least of all such change as you would bring us." We will not exchange our winter snows for your rains and mud, nor our consumptions for your bilious fevers, chills and agues.

But I am getting off from the subject. I began to write about the profit or loss in the farm account, of

growing the oat crop, and let us see how it is. There may be and frequently is a loss in this crop without "a total failure," for, like corn, the cost is more than most farmers who have not kept Dr. and Cr. with the crop imagine. The crop must be a good one to pay a profit; a light or poor one will hardly do it. The cost by the acre is somewhat in proportion to the yield; the harvesting, threshing and drawing to the nearest market, is considerably enhanced by the increase of bushels—the largest crop always paying the best. I find by my farm account, that the whole expense of the seed, top-dressing with gypsum, and the labor until the crop is delivered in bushels at the nearest railroad station, (3 miles,) averages \$14.00 per acre. To this should be added the interest on the value of the land, the annual cost of keeping fences good to protect the farm crops, the annual cost of keeping farm buildings in repair to house the crops, the interest on the cost of these farm buildings, and the taxes on both buildings and land. That is to say, we should divide all these last items of expense between our crops, apportioning to each crop as near as can be its portion of this expense; otherwise we are always deceiving ourselves in the cost of our productions. Thus should be charged to the crops 10 per cent. of the cost of the farm buildings, for their use; this will no more than give us 6 per cent. on the outlay and keep repairs good, and the insurance from fire. Then the interest on the land at what it is worth per acre, varies as to its locality, state of cultivation, &c. Oats may be grown in some sections of our country by the acre much cheaper than in others; even the labor is less in some places; and the value of the land, the cost of buildings, and the fencing materials, will vary the cost of this or any other crop materially. The value of the land on which I grow all my farm crops (except pasture) is \$100 per acre, exclusive of buildings; consequently the interest and the taxes are much more than where land is worth \$20 per acre. I must obtain good crops to make it a paying business. I find it necessary to add \$11.00 per acre to cover the expenses of the last enumerated items, to the \$14.00 first named, to cover all the expenses per acre of an oat crop, as the crop averages with me from year to year. This \$25.00 per acre, cost of raising, may seem large to some. It did to me until I tested it by actual experience.

Now for the balance sheet: My crop has not averaged less than 60 bushels to the acre for the last seven years, nor the price per bushel less than 45 cents, and from that to 67 cents. The past season I had eleven acres only—about half the quantity I have had some years. More than half of this eleven acres was on the inverted sod, which never will be quite as heavy as on land planted with corn the previous year, with a generous manuring. The yield is 67 bushels to the acre, average, and the price now is 45 cents, with a prospect of a considerable advance before another harvest; which prospect, in common with many others, I shall probably wait to realize, on all that portion of the crop not wanted for home use. By putting the crop now into market, 67 bushels at 45 cents, \$30.15—straw for winter feed, \$1.50—making the value of the crop per acre, \$31.65; deduct cost, \$25, leaving net \$6.65, over and above every item of cost or expense; or in other words 12½ per cent. on the value per acre of the land.

I know, Messrs. Editors, this is not a very large profit, but it is about equal if not better than many other investments, and has the advantage of being much more sure than most others; less harassing, less wear and tear to the mental faculties, and more invigorating to the physical. I am now speaking of farming in general—of no one crop in particular. It is the most reliable, the most pleasant for those who have a taste and inclination for it—the safest, the most conducive to health and happiness, to peace of mind and vigor of body, of all or every other pursuit under the sun. J. W. COLBURN. Springfield, Vt.

**Plan of a Sheep-Shed,
Forming One Side of a Barn-Yard.**

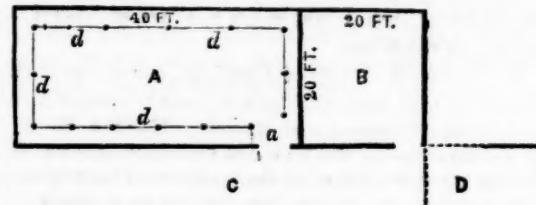


Fig. 1.

Fig. 1.—A. Plan of Shed, 40 by 20 feet—*a*. Entrance for sheep, 4 feet wide—*d*. *d*. Boards composing one side of racks; the sides of the shed are the back sides of rack—C. Barn-yard—D. Barn—B. Calf stable, and for parturient cows.

Fig. 2.—E. Top board of rack—F. Bottom of rack—G. Studs, the boards pinned to them.

The upper edge of the bottom board should be 18 inches from the ground for full-grown sheep, and the distance between the boards 8 inches. The studs should stand 16 inches from the inside of the sill, and 6 or 8 feet apart. Pin or nail a strip of board on the studs, with a piece of board between and at

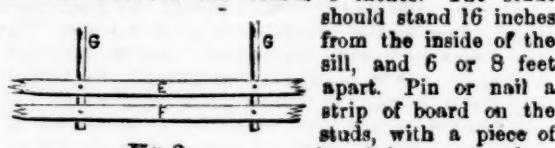
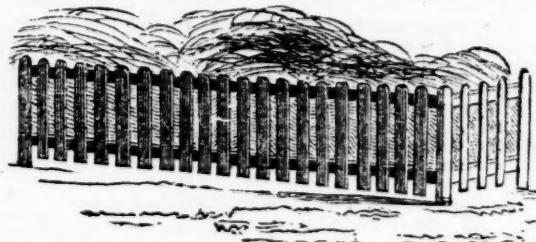


Fig. 2.

each end, so that the top and bottom boards of the rack may be moved easily up and down, as the manure requires; and bore holes through both for the pins that hold up the boards. More than one hole should be bored for each board, as the manure will accumulate during the winter, and the boards will need raising 4 or 6 inches at a time, once or twice. R.



[The above is from a correspondent. We would suggest the use of the vertical bars in constructing the racks, as being always at the right height under all circumstances, as shown in fig. 3.]

How to make Cheap Beef.

My stock for the last three years has consisted of good Durham grades, and I have just killed my first young bullock, aged 20½ months, and fed as follows: For the first three weeks he got the mother's milk pure; for the next four months plenty of good skimmed milk, good clover pasture and nothing else. At the first approach of winter he was taken up, *warmly housed*, and fed good hay, and 100 bushels carrots and 12 bushels oats, ground, at 20 cents. This spring he was turned out to good pasture, and got nothing else till Nov 18th, when he was fit for the butcher; but not wishing to kill him till the weather set in cold, I shut him up to the 11th inst., (Dec.) and fed him hay and meal, at which date he was slaughtered and weighed the four quarters, 688 pounds. The meat of a first rate quality and very fat. I do not state this as being anything wonderful, (though it is here,) but I should like to learn if any of your readers can raise cheaper beef. By this plan of killing early beef, I get rid to a great extent of one great bugbear, the long winter, as I avail myself of two whole summers to one winter, and I find it cheaper to winter calves well, than grown beasts. H. R. FORSTER. Credit, C. W.

The Art and Science of Butter-Making.

MESSRS. EDITORS—On reading the remarks made at the Farmers' Club of Little Falls, Herkimer county, which is distinguished for its dairy husbandry, and the rules for butter-making published in the COUNTRY GENTLEMAN of September 16, over the signature of Mr. A. B. DICKINSON, I have been surprised at the small progress attained either in the art or science of this important branch of rural industry. If my memory is not at fault, it is just forty years since the writer took, in company with older members of the family, a couple of dairy cows, samples of their butter, a pair of beautiful twin heifers, and a small flock of superior Merino sheep, to a county fair held in the village of Herkimer. I was then an agricultural student, living with a gentleman in the town of Warren, whom Mr. CRANE spoke of when Speaker of the Assembly, as "being the best farmer he had ever known in his life." Mr. C. keeps some 200 cows in the town of Warren; and the father of the writer had emigrated some years before 1818, from Warren to Chenango county, and settled on a dairy farm, which has ever since remained in the possession of the family, and been devoted to the production of butter. In 1825 I removed from Chenango to Western New-York, and soon found that the hard well and spring water of that region was altogether inferior to the soft water of Chenango for washing butter-milk out of recently churned butter. A knowledge of chemistry acquired in the study of another profession than that of agriculture, enabled me to understand the action of earthy salts dissolved in water, on the volatile oil which imparts its peculiar flavor to the butter; and also their effects on the solubility of the curd in butter-milk.

There are six substances in milk, which every dairyman ought to study as a part of his professional education. These are—1. Pure water—2 Caseum or cheese curd—3 Milk sugar, which imparts a sweet taste to whey—4. An involatile fatty matter called butter—5. An aromatic volatile oil, which may be agreeable or otherwise according to circumstances—6. Coloring matter, as shown in May and June butter.

The substances acting chemically on each other, which damage or spoil butter, when kept in firkins or otherwise, are curd sugar and water. Of these, curd being a nitrogenous compound, and not soluble in pure water, is the most difficult to remove entirely from fresh butter, and at the same time it is most prone to undergo chemical changes, and evolve the nauseous gases that give a bad smell and taste to rancid butter.

I can best point out the usual defects in working over fresh butter, by briefly reviewing the rules prescribed by Mr. DICKINSON. He says :

"As soon as the butter has come and gathered, take it immediately from the churn in its warm state, and put it in a large wooden bowl, which is the best vessel for the purpose; then put in cold soft water; then commence pulling the butter with a ladle, in so gentle and careful a manner as not to affect the grain—for as sure as that is injured at the washing or working, the butter becomes oily and can never be reclaimed. Every particle of milk must be washed out, and then season with the best Liverpool salt."

The above directions are equally sound in theory, plain and satisfactory. He then proceeds as follows :

"Set the bowl away until the next day, and when sufficiently cool work the mass thoroughly, but not so as to affect the grain; and on the third day pack it away if it has assumed the right color."

If butter is worked sufficiently to remove "every particle of milk" before it is salted, as it certainly ought to be, how can it be otherwise than that all subsequent "thorough workings" must injure the grain of the butter, (making the mass adhesive like grease,) and removing in the brine forced out, a large share of

the aroma which should remain in the butter? If it is important to "pull over" new butter, rather than crush and squeeze it, and if it is necessary that this manipulation be done in soft water, (which is the hardest kind of hard water) cannot fail of being very prejudicial. Let us suppose that some milk remains in the butter at the time salt is added—as directed by Mr. Dickinson, (and one working of soft butter just from the churn will not remove all the milk,) what is the chemical effect of the earthy mineral called salt, on the curd in the butter? Will Mr. D. answer this question? To aid him and others to give a correct answer, I will call their attention to the well known influence of strong brine on the fibrine of tender lean meat. Its solubility is impaired and its digestibility diminished, being transformed into a substance hard and tough like leather. After the fine particles of curd have been hardened in a mass of butter by salt, one might as well undertake to work out a handful of fine sand and clay from a bowl of butter, as all the caseum or cheese in the mass. If Mr. Dickinson had melted in the most careful manner, samples of butter prematurely salted, and those salted as directed by me, he would know that the latter contain much less curd than the former, when packed in the firkin. Fresh butter for long keeping, should always be hardened by cold water or ice, that the particles of butter may readily consolidate together before one attempts to expel the milk. From soft oily butter, the extraction of all milk is simply impracticable.

Kept in a cool place, butter needs no salt to preserve it before it is ready to be packed away. Then let it be moderately seasoned, and no brine worked out of it at all.

I entirely concur with Mr. D. in the opinion that pure soft water is required to wash all the curd and sugar of milk out of fresh butter—that to attempt to remove every particle of adhesive syrup and caseum by working new butter in butter-milk alone, in which they abound, is absurd. But as all earthy salts injure water for so delicate an office as that of cleansing the most fragrant and delicious butter—and as the purest natural water is that which drops from the clouds and percolates a short distance through pure sand, gravel, and charcoal, every dairyman should have a filter of this kind, unless nature has favored him with soft spring or well water. Compared with their value, filters and ice houses are very cheap. If the over-salting and over-working of new butter are injurious, as they certainly are, no less so is the over-washing even in the purest distilled water. Thousands work hard and long, and sadly spoil their butter for long keeping when they would have it extra nice, and utterly fail in their object. A knowledge of scientific principles is what they lack, although they neither see nor believe this important truth; and therefore they go on making frowy butter from childhood to old age, and cannot, if it were to save their lives, produce a firkin that will keep two years in a warm climate without stinking. I have watched the operations of butter making with lively interest for forty years; and if any one curious in such matters should ask how all the cows giving milk in the State of New-York in 1845, happened to be counted for the first time in the history of that great dairy commonwealth, and returned in the State Census, a correct answer could not be given without connecting my name with the investigation. Dairy cows have driven millions of sheep out of the state, and yet butter is worth about twice as much a pound now as it was 25 years ago. There is scarcely a limit to the consumption of really good butter; and I should rejoice to see its production placed on a sound and enduring basis.

That part of the subject which relates to the care and feeding of dairy stock, involving the consideration of the theories of Mr. Dickinson, I will discuss in another letter. CATO.

Winter Management of Fowls.

Among all nations of the earth eggs and poultry have long been used and highly prized as articles of food. But few animals are of so much utility as the species of fowl. Whether young, adult, old, male or female, these birds afford light and wholesome food, which is equally suited to those in good health and to those in a sick or convalescent state.

There are many who have not learned the difference there is in the richness and flavor of eggs produced by well fed hens and those from birds that have been half starved through our winters. There will be some difference in the size, but far more in the quality. The yolk of one would be large, fine colored, and of good consistence, and the albumen or white, clear and pure; while the contents of the other will be watery and meagre, as though there was not vitality and substance enough in the parent food to properly carry out and complete the work Nature had sketched. In order, therefore, to have good eggs, the fowls should be well fed, and also provided during the winter months they are unable to come to the ground, with an abundance of fine gravel, that they may be able to grind and prepare their food for digestion.

It seems ever to have been an object of great importance, in an economical point of view, to secure the laying of hens during those periods of the year when, if left to themselves, they are indisposed to deposit their eggs.

There appears to be naturally two periods of the year in which fowls lay—early in the spring and in the summer; and this fact would seem to indicate, that if left to themselves, like wild birds, they would bring forth two broods in the year. The laying of hens continues with few interruptions till the end of summer, when the natural process of moulting causes them to cease. This process, which is annual, commences about August, and continues till late in autumn. It is the approach, the duration, and the consequences of this period which puts a stop to their laying. It is a critical period for all birds. All the time it lasts, even to the time that the last feathers are replaced by new ones, till these are full grown, the wasting of the nutritive juices, prepared from the blood for the very purpose of promoting the growth, is considerable; and hence it is no wonder there should not remain enough in the body of the hen to cause her egg to grow. Old hens, therefore, cannot be depended on for eggs in winter—the very time we want them most. As pullets do not moult the first year, they commence laying at an earlier period than the older hens. It is possible, therefore, by having early broods, and by judicious and careful management, so to arrange as to have fresh eggs throughout the year.

The act of laying is not voluntary on the part of the hen, but is dependent on her age, constitution and diet. If she be aged and half-starved, lay she cannot; if she be young, healthy, and well-fed, lay she must. All that is left to her own choice is, where she shall deposit her egg, and she is sometimes so completely taken by surprise, as not to have her own way even at that.

The great art in the management of hens, in order to render them profitable, is to cause them to lay in winter, as it is the season when eggs are scarce and high. Undoubtedly much depends on circumstances, as to the productiveness of hens. Climate has great influence in this respect, and the lodging, food and care which is bestowed upon these animals, have more or less effect in promoting their fecundity.

If a person keeps a flock of hens in order to supply his family with eggs, or for the purpose of selling the eggs in market, he must manage so that they lay in winter, else they will not generally pay expenses. For in the first place he will be under the necessity of buying eggs when they are very dear, and if he wishes

eggs for the market, he has them only when everybody's hens lay, and he must sell them at a low rate.

In reference to the question often asked—"why cannot hens be made to lay as well in the fall and winter, as in the spring and summer?" In reply we would say they can to a certain extent; but they require as a condition, that they be well provided with *warm* and comfortable lodging, clean apartments, plenty of food in all its variety, consisting of grain, vegetable and *animal* food, pure water, and gravel, lime, broken oyster shells, and dry ashes or mold to roll and bathe in.

Whether fowls are suffered to run at large or are confined, there should be accommodations provided for them, in the way of a house to roost and lay in. It is well known that cold benumbs fowls, and retards and diminishes their laying. Intense heat is equally bad for them. Previous therefore to getting a stock of fowls, a comfortable place should be prepared for them. The accommodations need not necessarily be expensive. In selecting a situation for this purpose, regard must be had to a *dry* and *warm* situation. No animal suffers more from *damp* than fowls. Hence, in order to have hens lay well in winter, it is necessary to furnish them with a warm, dry room, where the vicissitudes of the weather and storms will not reach them. Some have been so careful in this matter, and ourself among the rest, as to dig into the sides of steep banks and form rooms for them there, where they can have proper heat, and always a supply of earth for dusting. This place faces the south, with a glass front to attract the heat from the sun. The roof, in place of being covered with earth, is covered with plank tongued and grooved, and lined with boards, and the space between the rafters filled with dry tan.

Next to bodily protection, food demands attention. It is profitable, and no mistake about it, to feed hens with *animal* food in winter. In the vicinity of cities, villages, and large towns, this can always be obtained in abundance, and at low rates; warm food, such as boiled potatoes mixed with meal or bran, given *hot*, is also beneficial. If they do not lay with care and attention, give them very little cayenne pepper mixed with their warm food. Hens suffer in winter for want of exercise. They will fly from their roost, eat their breakfast, and are almost motionless, and go to roost again soon after noon, especially if they have rather a dark house, or the day cloudy and dark. We avoid this evil by scattering their grain in straw and gravel, and let them scratch—their natural propensity—for a living. This is the best remedy for laziness, as that exercise which gains the food, gives a good relish for it.

C. N. BEMENT. *Springside.*

Mrs. CO. GENT.—You seemed so well pleased with a recipe or two from a lady correspondent, that my wife sends the following:

Graham Bread.

One quart of milk; scald one-half of it and pour on one quart of good Graham flour; then add the rest of the milk warm; and flour enough to stir as thick as possible with a spoon, adding half a cup of good molasses while stirring it—then bake slowly for an hour.

ANOTHER.—Two tea-cups of sweet milk, two of sour milk, half a cup of molasses, one tea-spoonful of soda, Graham flour enough to make a *thick* batter—bake slowly an hour.

This makes the better bread of the two recipes, in the opinion of the generality of people.

Graham flour to be good should be made of the best white winter wheat, and great care should be taken by the miller that it be not ground too fine. It spoils it to be ground fine; the bread does not rise well.

Curing Hams.

To every 100 lbs. meat, take 7 lbs. salt, 2 ounces saltpetre, 1 ounce cayenne pepper, 5 lbs. brown sugar, (or 2 quarts molasses.) In packing the hams, use one-half the salt. The rest of the salt with the other in-

gredients, should be put in water enough to cover the meat; boil and skim, but let it stand until cool—then pour it over the hams. Let them remain in this brine six weeks, then rinse and smoke. This recipe gives universal satisfaction.

Corned Beef.

To 100 lbs. meat, take 8 lbs. salt, 2 ounces saltpetre, 2 ounces pearlash, 1½ ounce cayenne pepper, 2 lbs. sugar (or 1 quart molasses). Directions the same as the preceding. Beef cured in this way will keep through the summer, and will not get too salty. This pickle will also do for hams.

There is another way of curing beef that is preferred by many: Pack the beef with 2 lbs. salt to the 100 lbs. meat, in tight boxes or barrels; let it remain two or three days for the salt to absorb the blood from the meat; then take it out, wash it clean, and pack with 7 lbs. salt to the 100 lbs. of beef, and 2 ounces saltpetre, in good barrels. Beef cured in this way will keep in the summer on a sea voyage. The meat is rendered harder, however, and not so sweet as when cured according to the previous recipe.

Mrs. N. would have written these herself, but I had leisure to write, while she was playing on the "big wheel," an accomplishment understood by but few women of her age (28) now-a-days. If the wives of our young farmers understood this art, their husbands and children would thank them, especially in the winter. Factory hose and mittens will not compare very favorably with good "home made" ones; and if we have these our wives have to make them, as they can seldom be bought at the shops. D. A. A. NICHOLS.

Experiments with Wheat and Corn.

MESSRS. EDITORS—In reading your valuable paper I have often been much interested in the results of agricultural experiments made by your correspondents in various sections, but rarely see any from Long-Island, and I confess I feel some delicacy in giving your numerous readers, scattered over the fertile fields of the west, the result of some of my experiments on this seagirt isle, where a quantity of manure must be used, almost alarming to a western farmer.

Nevertheless, as you have as anxious and earnest readers here as anywhere, I take the liberty of sending the result of two experiments made this year with Indian corn and wheat.

The soil is of a sandy loam, in which the sand greatly predominates; sub-soil of yellow sand.

The corn was of the large eight-rowed white variety, which I deem the best suited to this section. It was planted four feet apart each way, and worked out twice with Langdon's horse-hoe, leaving the ground nearly level, and followed each time by the hand hoe.

The field was divided into four parts, and manured as follows, viz:

No. 1—Forty wagon loads of coarse barn-yard manure to the acre, plowed under, and 300 lbs. Peruvian Guano in the hill—yield one basket of ears to 16 hills.

No. 2—500 lbs. Peruvian Guano to the acre, plowed under, and one pint of leached wood ashes in each hill—yield one basket of ears to 16 hills.

No. 3—500 lbs. Peruvian Guano to the acre, plowed under, and one quart of coal ashes in each hill—yield one basket of ears to 17 hills.

No. 4—500 lbs. Peruvian Guano to the acre, plowed under, and 300 lbs. in the hill—yield one basket of ears to 17 hills.

Yield of the field of six acres, 190 bushels of ears to the acre.

I last year obtained some Soules and Bluestem Wheat from Michigan, for the purpose of testing the efficacy of your oft repeated advice, to procure grain for seed which is raised upon different soil, and in a

different climate from that where it is to be sown. I sowed it in the last week in September. The Soules proved a failure, and seems not to be suited to this section. Though sown under favorable circumstances, it was late in ripening, of poor quality, and was very much injured by the weevil—and in short, was not more than half a crop.

With the Blue stem I succeeded admirably. It not only yielded a third more than the Mediterranean, but finer wheat never grew in this or any other section.

A sample of the wheat, and of flour made from the wheat, was exhibited at the Queens County Agricultural Fair, and each took the first premium.

Nearly the whole of my crop was sown in this vicinity in September last. GEO. R. UNDERHILL. Matinecock, Long-Island, Dec. 31.

Gross and Net Weight of Swine.

ENS COUNTRY GENTLEMAN—I rode up to McLean to witness a "Hog Killing Festival" that our Groton friends ushered in the new year with—and after tendering to you and the readers of the "COUNTRY GENTLEMAN," the compliments of the season, I will give you the weight of the five largest hogs slaughtered, to test the rule of estimating the net weight of a hog by deducting one-fifth of the gross weight, as per "Tribune," published in last week's Gentleman—thus:

First—A hog fattened by E. Per Lee—age 2 years 6 months—live weight 879 pounds—dressed weight 751 pounds. The "Tribune's" rule makes this hog weigh 703 pounds.

Second—John P. Hart's, 2 years and 1 month old—live weight 740 pounds—dressed weight 629 pounds. The rule makes this hog weigh 592 pounds.

Third—D. W. Woodbury's, 1 year and 8 months old—live weight 741 pounds—dressed weight 634 pounds. The rule makes this hog weigh 593 pounds.

Fourth—L. Townley's, 1 year and 9 months old—live weight 740 pounds—dressed weight 629 pounds. The rule makes this hog's weight 592 pounds.

Fifth—Lewis Ogden's, 1 year and 9 months old—live weight not ascertained—dressed weight 644 pounds.

It will be noticed that the "Tribune's" rule gives the net weight about six per cent below the *real net weight*. If this rule is used in practice, sellers should add six per cent to the amount indicated by the rule, until corrected again by a larger number of results. The result of small hogs may vary from the above. Will farmers furnish results till a standard rule can be established? E. CORNELL. "Forest Park," Ithaca, Jan. 1, 1859.

Bread without Yeast or Milk.

MESSRS. EDITORS—I send you the following directions for making excellent, light, sweet bread, without yeast, salt, milk, saleratus, or soda—with nothing, in fact, save water and flour:

Take boiling water; let it stand until the temperature is reduced below the scalding point; then stir in flour as thick as you can well beat it with a spoon. Set it in warm water kept at proper temperature, to promote fermentation, which will usually be completed in from three to four hours. If it should become thin after standing a while, stir in a tea-spoonful or two of flour, beating it occasionally until it commences to rise. When light, put it with the flour, mixing up with water and kneading thoroughly; then make into loaves, and put on tins to rise, keeping warm, and bake as usual. After several years' experience in making bread according to the above directions, I prefer this method to any other with which I am acquainted. ELSIE M. EMERY. Cardington, Ohio.

A MAN who has a fixed purpose to which he devotes his powers, is invulnerable. Like the rock in the sea, it splits the troubles of life, and they eddy round him in idle foam.

Barley in Western and Central New-York.

Barley even before the advent of the wheat-midge, was considerably cultivated in Central and Western New-York, but for several years past it has been the leading grain crop grown for sale in place of wheat, and depended upon largely by the farmer for obtaining ready money. Some years it has been largely profitable, giving from 50 to 100 per cent. return for the capital employed; but for the last two or three years the product has generally been much less, and, for some cause, largely deteriorated. All the causes of this decline in product are not known. We shall attempt to indicate some of those which influence to this result, and give our views in relation to the changes in farming made prudent by this partial failure.

Barley is an exhausting crop—a fact not sufficiently regarded in its culture, and one great reason for its small yield in many instances. It cannot be grown profitably on poor soils, on light soils, or even on good soils for more than a year or two at a time, without deterioration. This was forcibly brought out at the Evening Discussions at the last State Fair, and conversation with many practical farmers since that time, has confirmed us in the belief that barley growing has been *run too hard* by a great majority of those engaged in it, particularly in the section to which our remarks refer.

Particular attention to the soil and culture are needed by the barley crop. It requires our best soils, and they must be well drained and finely cultivated. Drained, that they may not suffer from wet or drought, and in fine tilth, that the rapid growth of this plant may be well supplied with the elements required. Even then, unless the season is peculiarly favorable, we do not seem certain of a large crop. Both wet and heat affect it to a considerable extent—some attribute the failure to form heads, observed in some cases even on good soils, to the latter cause. Early sowing is requisite, and yet many growers fear to sow early because it exposes the crop still more to the midge.

Insects have had considerable effect in producing the decline in the product of the barley crop. It has been known for some time that a sort of maggot was sometimes found in the straw, changing its character and destroying its value, as well as causing a large decrease in grain. An entomological writer declares it to be a species of *Cecidomyia*—resembling in some respects the *Cecidomyia Tritici*, or wheat midge. Farmers have thought it the identical midge, which finding no wheat for attack, commenced ravaging the barley fields. Further light is required on the subject, and we hope to be able to communicate the same through our columns hereafter.

Over cropping, careless culture, late sowing, unfavorable seasons, and the attacks of insects, have all had their influence; but it still seems difficult to account for the decrease in product observable in many instances where no difference of condition, season, or culture, can be remembered. Not only is there a considerable falling off in bushels per acre, but in weight and quality of grain, in the character and the value of the straw, and in the whole crop—it appears less handsomely, yields less productively, and pays far less profitably than heretofore.

What course then shall farmers pursue? They do not wish to devote their labor to an unremunerative crop. We have only room to propose a few questions for their consideration.

It is said that Winter Barley, which we have not

taken into account in the preceding remarks, still proves productive, subject only to winter killing rather more than wheat, and requiring equally good soil and cultivation. Why not then sow winter wheat, which is found with proper care—as much care as would be required for winter barley—to prove equally as remunerative?

Which crop will be likely to prove most profitable on any given soil, fit for either crop, Indian corn or barley? In considering this, we would take into consideration the influence upon the soil and after crops, and the value of the entire product for sale and use upon the farm.

On a soil deemed uncertain for a good crop of barley or corn, why not sow oats, giving them as good tillage and as early sowing as we would the barley crop? The yield of oats would be pretty certain to be two or three times as many bushels as that of barley, and the straw would be of much greater value for all purposes.

Why plow and cultivate at all any more land than we can farm thoroughly? Are not dairying, stock and wool growing, about as profitable as any branch of farming now pursued in Central and Western New-York?

We invite our farming friends to a free discussion of these topics in succeeding numbers of the COUNTRY GENTLEMAN.

An Experiment in Draining.

When we witness the change of a sterile soil into a fertile one through the influence of draining, it is conclusive evidence of the value of labor so applied. Such has recently come under our notice, and we shall recall it for our readers.

It not unfrequently happens in hilly or gently undulating districts, that intervals and damp springy soils abound, requiring draining before it can be brought into profitable cultivation. The instance in question, was a field of fair surface, quite free from stone, but receiving from more elevated land a continual supply of clear, cold, soft spring water, which ran over nearly the whole surface. The owner, faithless of reclaiming the lot, was yet desirous of collecting the water to supply a reservoir for cattle. This was mainly accomplished by cutting a drain across the slope of land near the upper side of the field, for about a hundred rods in length, which did so much for draining the surface that other ditches were cut completing the work. The drains were finished with the flat stone usual in such districts, carefully laid and covered with a good coat of straw, before replacing the dirt. Now of the change produced.

A crop never grew upon this lot from the time it was cleared until after it was drained. Water grasses and weeds were the only product; but since draining, it has produced annually over two tons of good hay per acre, without any manure. The appearance of the soil is wholly changed, from a tenacious blue clay, adhering to one's boots like tar—it has become a clear, black, clay loam—just such a soil as always produces remunerative crops to the farmer.

Willard's Root-Cutter.

On page 269 of the last volume of the Country Gentleman, we gave an accurate figure of this machine. The machine was furnished by George Campbell of West Westminster, Vt., and is sold by Ruggles & Co., Boston. We have since given it a fair practical trial, and find it very efficient. It will cut a bushel of roots in a minute; and a half bushel if worked quite slowly with the strength of a boy. It slices up the roots into shavings about three-fourths of an inch wide and half as thick, the principal wheel being a cast-iron plate set with small curved blades which do the work, the plate operating at the same time as a fly-wheel. It is evidently a great saver of labor, especially so to the animals which have to do the chewing.

Meetings of Ag. Societies.

ALBANY CO. AG. SOCIETY.—The annual meeting was held at the City Hall in this city, on the 12th of Jan.—the President in the chair. The annual report of the Secretary, was read, accepted, and ordered filed. The Treasurer made a verbal report, when on motion his books were referred to a committee consisting of L. G. Ten Eyck, E. H. Ireland, and Robert Harper. On motion of Judge Hilton, a resolution was adopted, recommending that the next State Fair be located at Albany, and a committee, consisting of Messrs. Joseph Hilton, R. H. Pease, R. M. Griffin, J. W. Jolley, E. H. Ireland, and the President and Secretary, was appointed to confer with our citizens and the State Ag Society on the subject. An election for officers then took place, which resulted as follows:

President—**WILLIAM HURST**, Albany.
Vice-President—Richard Kimmey, Bethlehem.
Secretary—J. C. Cuyler, Albany.
Treasurer—Horace L. Emery, Albany.
Directors—John Cutler, Albany, and Joseph Hilton, New Scotland.

During the year the receipts from all sources, were \$3,916.98, and the disbursements \$3,456.70—leaving a balance of \$460.28.

Art. 9 of the by-laws was then so amended as to require all bills to be audited by the Board of Managers before being paid by the Treasurer.

VERMONT STATE AG. SOCIETY.—At the annual meeting, held at Middlebury Jan. 5, the following officers were elected:

President—**E. B. CHASE**, Lyndon.
Vice-Presidents—Edwin Hammond, J. W. Colburne, H. H. Baxter, Henry Keyes.
Treasurer—D. Seymour.
Secretary—Charles Cumings.
Directors—F. Holbrook, J. W. Vail, H. S. Morse, John Gregory, U. H. Penniman, J. Jackson, D. R. Potter, D. Needham, D. A. Benedict, and Elijah Cleveland.

Mr. Needham of Hartford, presented the following resolution, which was unanimously adopted:

That the Bill known as the "Morrill Land Bill," has the hearty approval of this Society, and that it is due to the great cause of Agriculture, that the passage of the Bill should be secured.

The Treasurer's report exhibited a balance of \$3,361 in the Treasury.

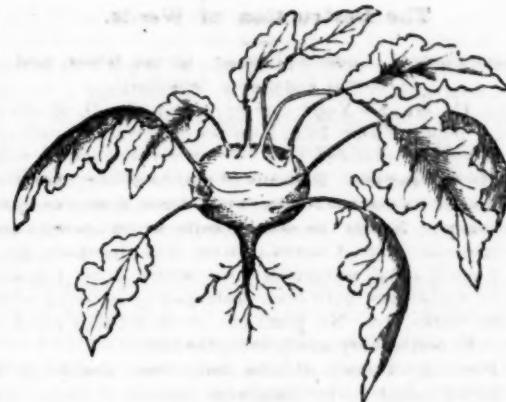
David Hill, Nathan Cushing, and Geo. T. Hodges, were elected Honorary Members of the Society.

CONNECTICUT STATE AG. SOCIETY.—The annual meeting of this body was held Jan. 12, and resulted in the choice of the following officers:

President—**EPHRAIM H. HYDE**, 2d, Stafford.
Vice-Presidents—J. P. Barstow, Norwich, and Robbins Battell, Norfolk.
Corresponding Secretary—Henry A. Dyer, Hartford.
Recording Secretary—T. S. Gold, West Cornwall.
Treasurer—F. A. Brown, Hartford.
Chemist—Prof. S. W. Johnson, New Haven.
County Directors—Horace Williams, Hartford Co.; W. Webb, New Haven Co.; James A. Bill, New London Co.; J. Gould, Fairfield Co.; Peleg C. Child, Windham Co.; Abijah Catlin, Litchfield Co.; W. G. Buell, Middlesex Co.; R. B. Chamberlin, Tolland Co.

PHILADELPHIA SOCIETY FOR PROMOTING AGRICULTURE.—The annual meeting of the Philadelphia Society for Promoting Agriculture, was held Jan. 5th, when the following persons were elected officers for the ensuing year:

President—**CRAIG BIDDLE**.
Vice-Presidents—A. T. Newbold, C. W. Harrison.
Treasurer—George Blight.
Corresponding Secretary—S. G. Fisher.
Recording Secretary—A. L. Kennedy.
Librarian—J. McGowan.
Assistant Recording Secretary—P. R. Freas.
Executive Committee—John Lardner, Sam'l Williams, D. Landreth, A. T. Newbold, John S. Haines, Craig Biddle.
Library Committee—David Landreth, Craig Biddle, George Blight.



Kohl Rabi.

This plant, the seeds of which have been somewhat extensively distributed from the Patent Office, promises, if we mistake not, to assume a prominent position among the products of the vegetable garden.

The plant resembles the Ruta Baga in its leaves, below which, and above ground from two to four inches, it forms a bulb like the common English turnip. From the bulb down to the fibres, in the earth, the stem is comparatively small and tough. The bulb is the portion used as food, of course, and is cooked and served up like the turnip. In taste, it ranks between the cabbage and cauliflower.

Like all garden vegetables, it is best when very tender, and to make it so, it should have a rapid growth. It may be started in a hot-bed in April, transplanted in May into a quick, rich soil, and be brought to the table in June or early in July. In after culture, the most it requires is to have the ground kept clean from weeds. In June the autumn supply may be sown, or very probably they will succeed if sown in July. As we raised our first crop last season, we cannot yet speak of its qualities as a winter vegetable, though it promises fair.

It gives us pleasure to record whatever of good results in the distribution of seeds from the Patent Office, and we cheerfully note the above from among many exceptions, for when we receive a bundle, the duplicates of seeds which we and our neighbors have raised as long as we have planted and gathered, we cannot think that government is doing the State much service by lumbering the mail with what we can readily obtain at home. But perhaps some one is benefitted. If so, we are glad of it. W. BACON. Richmond.

For the use of the cut at the head of this article, we are indebted to O. Judd, Esq., Ed. *America agriculturist*.

To make Apple Jelly.

MESSRS. EDITORS—Not having seen this in print, I thought I would send it to you for the good of all wishing it.

Peel and core the apples—Spitzenbergs are best—put them in a brass or porcelain kettle, with water sufficient to stew them without burning. When soft press out the juice through a woolen cloth. To one quart of juice add one lemon, and boil ten minutes; then put in one quart of sugar—let it boil until it is thick enough—you can tell by cooling a little)—then strain through the woolen cloth again, and it is done. E. S. B. *Burnt Hills*.

Drying Pumpkins.

EDS. CO. GENT.—I thought it might be beneficial to the readers of your paper, to give you my way of drying pumpkin.

Peel and cut as for stewing—then slice very thin—(it can be done with a cabbage slicer)—then spread on tins or other driers, and put in the stove oven with a moderate heat. It will retain its natural flavor better than any way I ever tried. In preparing it for pies, soak it in water a few hours, and stew in the same water. E. S. B. *Burnt Hills*.

GRAIN-RAKER.—Where can I purchase one of the "Grain-Binder's Wheel Rakes," illustrated on page 337 of the Register of Rural Affairs for 1857? What is the price? EDWARD ABORN. *South Seekonk, Mass.* [Will some of our readers please answer?]

The Destruction of Weeds.***Live-Forever, Canada Thistles, Quack Grass, and Perennial Vegetation Generally.***

EDS. CO. GENT.—Your correspondent, D. D. Meeker, in your paper of Dec. 16th, inquires on the above subject. I have never contended with live-everlast, beyond its presence in my garden. It seems to me, however, that the question of its destruction does not demand any specific experience. Nearly the same questions and answers are applicable to elders, Canada thistles, dock, burdock, &c.

1. I could detail numerous cases where dock, Canada thistles and elders, have been destroyed by covering with boards, barks, &c. No plant can grow without air and light. Covering very much excludes both.

2. *Plowing.*—Canada thistles have been destroyed in one summer, by six plowings in the months of June, July and August. This certainly is expensive—yet in a badly infected field of good soil, and where agriculture is highly profitable, it may be better to do so than lose the use of the land entirely.

3. *Cutting.*—This may be done with the hoe or scythe. Herbage kept down by constantly being cut off, must eventually die. In case of the borders of a field grown up to elders, briars, golden rods, &c., the very best way, I think, is to cut them all off close in the spring and remove the stones, and also make the surface even. The use of the scythe once in two or three weeks for one summer, will, with great certainty and tolerable cheapness, destroy them. So also, cutting almost any vegetable off in the height of its growth, say when in flower, will often utterly destroy by one operation. This result is especially made more sure, if soon after the cutting rain should fall to fill the hollow stalks, and be followed by hot sun. I have, myself, thus destroyed cases of Canada thistles by one mowing.

But if you wait till the plant is nearly ripe, when of course the root has been strengthened, you will fail. All persons who have dug about elders, golden rods, briars, &c., late in the season, must have observed buds set just beneath the soil. When this is the case, cutting off the old plant does no good. The energy concentrated about the root will send up a vigorous shoot the next year. I have known elders, growing in the grass of a door-yard, spring up the second spring, after having been faithfully cut off during a whole summer. But the growth last noticed was very feeble, and was checked by once more cutting them off.

4. *Culture.*—The worst piece of quack I ever saw I destroyed in one summer, by cultivating a hoed crop among it. Potatoes have been recommended for this purpose, but I think unwisely, as they are injured by late culture, such as would often be found needful to finish the thistles. I prefer corn, bush beans and cabbage, with all of which I have been successful, and that without much cost beyond ordinary culture. The precaution should be taken to plant your hill in a spot made clear at the time—then you can hoe the more boldly. It is further necessary that you should hoe in dry hot weather. Hence this plan fails in a wet season. After the first hoeing of a quacky crop, it is often well to go over it lightly in the middle of a hot day, just skimming the surface of the soil, and cutting off the young grass. I have seen during the last summer, a very quacky field nearly cleaned in the following manner. It was twice plowed, (having been in barley the year before,) and thoroughly harrowed in dry weather. Then it was planted a little late to potatoes. These were subsequently plowed and cultivated pretty frequently in dry weather, except right about the hills; the destruction was nearly perfect.

5. *The use of Salt.*—This, to be effectual in the case of a large field, must be applied so liberally as to destroy not only the foul vegetation, but the crop too; and hence you cannot cultivate it. Your land, too, in some cases, might be injured for the succeeding year. This method is moreover costly. Yet the limited use of salt is often advisable, as where some offensive plant is so situated as not readily to be dug out. In this case, if it be cut off smoothly, and a handful of salt be laid upon it, its destruction may be ordinarily insured.

6. *The Culture of Buckwheat.*—The sowing of successive crops of buckwheat, during the same season, in foul land, is often one of the readiest modes of clearing it. In this case the crop should be rolled down when in flower, and another crop of the same be sowed upon it. The foul vegetation will spring up with the buckwheat, but will soon be shaded and dwarfed by it. The succeeding plowing will destroy it. Thus as often as you plow you destroy a crop of weeds, &c., also, while the result of the whole operation is to deepen and mellow your soil, as well as in

some sense to enrich it—not certainly by adding any mineral wealth to it, but by altering its mechanical condition, and filling it with vegetable matter. Under this general idea of the use of buckwheat, I may relate that a field near me was sown with corn in 1857, for soiling. So effectually was foul vegetation destroyed by this culture, that in renting the land myself this year, for potato culture, I found the soil very unusually clean. C. E. GOODRICH. Utica, Dec. 31, 1858.

How to Increase Your Supply of Manure.

"A Beginner upon a Worn-out Farm," inquired of one of our correspondents what methods and what materials he would advise him to employ in order to increase his supplies of manure, as he was persuaded that his farm, which he had just bought with a perfect knowledge that it had produced very scanty crops for several years, would require all the supplies of this kind which he could possibly "scrape together" for some years to come. Our correspondent thinking it probable that some of the readers of the *Cultivator* might be without experience in this matter of making manure heaps, as large as possible, and as much as his neighbor in need of a little help in the way of informing them, or at least reminding them, in regard to *what can be done* in this line, has sent us the substance of his talk with "A Beginner" as follows:

"As a comprehensive direction—one that includes every other—I advised him to collect and carry to his manure or compost heap anything and everything that ever came from the soil—everything vegetable, animal, or excrementitious which he could get hold of at a moderate cost, or without too much labor. I advised him to let nothing, either vegetable or animal go to waste, not even weeds, where they could be got readily and fermented so as to destroy the vitality of the seeds, stating, however, that all animal products were richer than vegetable ones, as they contained a larger per centage of nitrogen, or material for the formation of ammonia. Everything that ever came out of the soil—and this includes everything whether of a vegetable or animal nature—would, I assured him, tend to enrich the soil to which it might be returned.

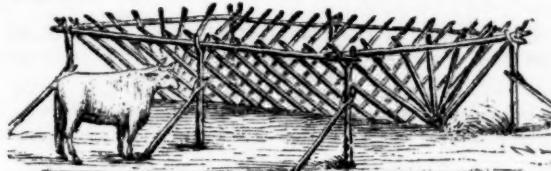
"Having given him this all-comprehensive and easily remembered direction, I condescended upon a few particulars. I advised him, for example, to have his stables, yards, &c., so constructed as to prevent the loss of urine, or any liquid whatever; and that he should use absorbents, as muck, sawdust, litter, mold, or any soil at hand, to take up and retain these liquids, until he should get his stables, sheds, yards, &c., so constructed as to prevent such waste as I had alluded to. This direction, which virtually amounts to this—make the most of your stable and barn yard manures, and do not suffer them to be wasted by rains, &c., is one whose excellence is at once acknowledged, but which is almost universally disregarded in the region of country where "A Beginner" had taken up his abode. The neglect of this direction was, indeed, one of the principal causes why the farm which he had bought, had become so exhausted that its former owner could not raise enough from it to pay his debts, and had therefore to sell and move away. And so general was this neglect in the vicinity, that it was thought a point of importance to A Beginner's success to impress it upon his mind, that one great reason why the soil he had now to manage, and the soil of many farms around him, was so poor, and why the owners of so many of them were constantly complaining of bad luck, and being too poor to do this, that or the other thing, was just this—they allowed large quantities of plant-food, which if saved and judiciously used would have produced luxuriant and abundant crops, to run off in streams from their yards and manure heaps, or to contaminate the air with odors, whose offensiveness was probably wisely designed as a warning, or as an inducement to the doing of what is needed for the prevention of this foolish waste. A man of discrimination would not be at any loss to account for poor crops and poor farmers in any district in which streams of a certain brown liquid were to be seen oozing away in a wet time, for his penetrating eye would see gold, or that which would have become gold, making its escape both in this liquid and also in a gaseous form.

"Having made, or while yet making, proper provisions to save all the fertilizing matters produced upon the farm from waste, "A Beginner" was advised to avail himself of certain fertilizing materials outside of the farm, which though easily to be had, are generally neglected, such as leached ashes, the refuse at tanneries, the sweepings of shoe-shops, &c. He was told that his soil and his crops would bear witness of his wisdom, if, whenever he was about to return from the village with his wagon empty,

he would call at one or the other of these places, and get a load of some of these neglected fertilizers. Other hints of a similar nature were added, but for the present the foregoing may suffice."

Straw Rack.

EDS. CULT. AND CO. GENT.—I send you a plan of a rack that I constructed last fall, for the purpose of feeding out my wheat straw to my cattle. The custom of farmers in this part of the country is to stack up the straw in large stacks, and in the winter turn the cattle to them; they eat out the lower part of the stack until it totters and falls; the straw is wet through by the first rain, and rots in a heap. I have known several instances where calves and sheep have been smothered by stacks falling. Last fall I had the straw off twenty acres of wheat, and, as I was scarce of fodder, built a rack like the model I send you, upon which I could stack all my straw. If you think it would be of benefit to any of your subscribers, you can lay it before them in the Cultivator. The drawing is only a section of the one I built. Mine was 60 feet long; but it may be lengthened out to any extent.



I got from the woods 16 rough forks, 6½ feet long from 4 to 6 inches in diameter. I dug 7 holes in a line, 10 feet apart, 18 inches deep; parallel with these I dug another set of holes 12 feet from and opposite the first 7, and set a fork in each of the 14 holes. I then set the two end posts opposite the center of the two rows, and 10 feet from the two end posts. I then placed poles in all of the forks, and with other forks placed against the first 14, braced the whole to prevent the weight of the straw from pressing them out. I next dug a trench about 6 inches deep through the center, and set in common fence rails, leaning the tops against the side and end poles around the whole—the rails about 6 inches apart, or sufficiently wide for the cattle to draw the straw from between them. Round poles from the woods with the bark off, would be better than rails. This completed the rack. Now put in your straw and tramp it in until the rack is filled up level, which will be a good foundation to stack your straw on, which should be stacked up until it will shed rain, and let it stand until you are ready to turn your stock to it, and it will be both food and shelter to them.

The advantages of this rack are, 1. It saves any farther handling of the straw, as it is a self-feeder—as the cattle eat out below the stack settles down. 2. It affords shelter for the cattle from rain and winds, under the rack, and good dry beds for them to lay on. 3. The braces partition the rack off so that there are places for the weak and the strong, without much danger of the weak and timid being injured or terrified by the vicious and overbearing. 4. The whole of the straw will be consumed and made into good manure, without any loss of its strength, as the waste straw will absorb all of the liquid and gases of the droppings. 5. It is cheap.

One word by way of suggestion. My rack is set east and west. The cattle stay most on the south side, and eat out that side, causing the straw to incline to fall over that way. It would be better to run it north and south; then they would eat on the east side in the morning, and the west in the evening, and keep it better balanced. D. L. ADAIR. Kentucky.

Farming in New-Jersey.

ESTEEMED FRIENDS—One of my neighbors in the course of a conversation about farms yesterday, mentioned a farm of his, adjoining the one on which he lives, which is some three miles from our county town (Mt. Holly,) containing 80 acres, which he rented for \$600 per annum, and had rented it for five years at that rate, and the tenant made his rent easily. He kept 18 cows, 40 sheep, 2 work horses, and 2 brood mares.

I thought it would show a little of what our Burlington county land is, but have no doubt but that a great many farms in the county rent for more than this one does. Since I have been writing, I recollect one within two miles of my own residence, of 70 acres, which the owner rents to the shares, and his share has amounted to \$800 in a year, and I imagine does not often fall much below that.

These are not what are termed with us truck farms, but depend on grain, stock, potatoes, and fruit—this last item principally apples, with a few peach trees, perhaps. Many of our farmers fat two calves on each cow they keep, and afterwards make butter; some fat more than two to a cow, but it is, I believe, generally thought injurious to the cows to let more than two calves go to one. They are rather apt to miss having a calf the following year, if too many calves are fattened on them. Our farmers buy ewes in the autumn for, say \$2.50—put them to New-Leicester, Oxfordshire, Broad-tail, or some good ram; then sell the lambs for from \$3 to \$5; sell the fleeces of the ewes, and then sell the ewes for about \$3, toward autumn. They generally keep their calves until they weigh over 200 lbs., and sell them for 5 or 6 cents per lb., live weight—averaging, I should think, \$12 each. They have to give from \$1.50 to \$3 for young calves; these they buy of milkmen in and near the large towns and Philadelphia. D. S. Burlington Co., N. J.

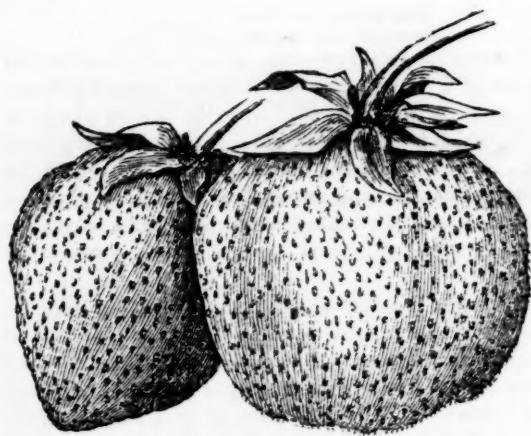
P. S. Some Indian meal is generally given to the calves, in addition to the milk they get from the cow.

Cranberries from Seed.

EDS. CO. GENT.—Your correspondent, J. Stafford of Cleveland, in a late number, (Dec. 16th) of your paper, asks whether cranberries can be raised from the seed. In addition to your own affirmative answer, let me detail my own experience on the general topic.

1. In the spring of 1851 I procured a small keg of cranberry soda from the south shore of Long-Island. They there grew in water slightly brackish. They were here set in a variety of moist soils, varying from clay to muck, and thence to sand. They all grew and prospered. But they never proved profitable, on account of the production of weeds and grass among them. I had no soil poor enough for them.

2. The same year I sowed many seeds got from western varieties purchased here in market. They were planted by drawing a slight trench in a damp, mucky soil, and filling it after the seeds were dropped, with a light colored sand. Thus I had fewer weeds spring up with the plants, and was able to mark the exact position of the rows. A fair proportion of the seed came up; but it was a long time before they appeared. The plants were readily recognized when first coming through the soil, by their bright scarlet color. The young plants are so small, and grow so slowly the first summer, that I would advise no one to attempt their cultivation who can possibly get sods. I forgot to say in the proper place, that the seeds are very small, and require to be covered very thinly. C. E. GOODRICH. Utica, Dec. 31, 1858.



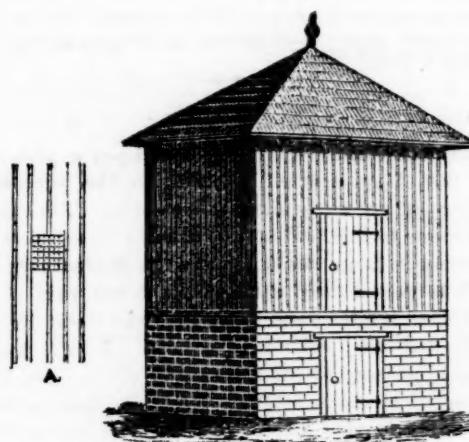
The Peabody Strawberry.

The largest specimens of this variety which we raised the past year with ordinary cultivation, were an inch and a half in diameter—or about four and a half inches in circumference. The figures are the exact size of specimens grown with ordinary care. The flavor is of first quality. The plants appear to be hardy, having withstood the past winter without protection. We fear, however, it may not generally prove very productive. Were it as profuse a bearer as some sorts, it would stand ahead of all, as its firmness and high flavor would fit it pre-eminently for table and market. The American Agriculturist gives a letter from a correspondent in Onondaga Co., N. Y., in which he says that of eleven plants which lived from a setting in the spring of 1857, and which he had increased to a bed 5 by 17 feet, he picked last season 14½ quarts of large delicious berries. Some were five five inches in circumference. This is a pretty large story—the product being at the rate of 220 bushels per acre. Generally, the experiments at the north have given far less. Another year will furnish more knowledge.

The paper above quoted tells a still larger strawberry story, namely, that the Editor obtained from a bed 6 ft. by 16, enriched with hog manure previous years and more lately with bone sawings, and planted with Longworth's Prolific, Hovey, McAvoy's Superior, Large Early Scarlet, and Burr's New Pine, over one bushel of large berries. This is at the rate of about four hundred and eighty bushels per acre!! We do not say any mistake was made, but some cultivators think so. Some of the sorts are not eminently productive generally.

Increase in Weight of Steers.

MESSRS. EDITORS—I purchased some small lean steers last spring, nearly three years old, weighing on the 12th of March from 750 to 870 lbs. each. I weighed again the last of October, and found they had gained from 355 to 400 lbs. each. Their feed was 4 bushels of corn and 4 do. oats, mixed and ground, and fed to each beast from the time I got them to 16th of May, with an allowance of one quart of oil-cake meal each daily. On the 16th May they went to good pasture, and fed nothing else. I don't know that the gain was anything uncommon, but I thought it good, considering the size of the cattle and the meal they eat. Their fodder was cornstalks and hay. The steers were of the common stock, with a little Devon blood in them. I wish other feeders would let us hear how much gain they get from the different modes of feeding. Sure I am there are many poorly wintered steers that gain little in a year. JOHN JOHNSTON. Near Genera.



Smoke-House.

MESSRS. EDITORS—Annexed I hand you a drawing with detail of a smoke-house that I have just finished, which may present some features, which, if not new, in their combination as a whole give a cheap, substantial, safe and complete smoke-house, at the same time quite handsome in appearance.

A foundation of stone two feet wide and about three feet deep, rises above the earth one foot. The first or bottom stone projects outside of the wall four to six inches, as a security against rats working under. The brick wall of 14 inches, is 6 feet high. On this, first joists, 2½ by 12 inches, are laid and framed together, forming a hatchway four feet square—see fig. A. The sills are 6x6, corner posts 5x5, studding 2½x3½, plate, 4x6, firmly morticed and braced. The siding is six inch pine fencing set on end, one inch thick, 12 feet long—first course three inches apart. The hip roof projects 16 inches at eaves, with a box finish of 12 inches. The door-way into the meat-room is from outside, and reached by steps resting upon a platform, which are secured to the platform by hinges, and are kept off the ground by a cord running through a pulley attached to the house corner, thus keeping out rats. The lower or fire room has a gravel floor six inches deep, grouted with hydraulic lime, preventing most effectually the possibility of rats either working up or securing a hiding place if once on the inside. The second floor is made of oak, well jointed, 1½ by 6 inches. The hatch door is made of oak slats, 1½ by 3 inches, let into each other, leaving space of 3 inches for the smoke.

The building is 14 feet square, 19 feet to top of siding; roof 5 feet to cone; doors 3 by 5½ feet high. W. C. ANDERSON, JR.

[It will be necessary to keep the water-lime coating in the ash-vault well covered with a foot or so of ashes in winter, to prevent the combined action of moisture and frost from cracking and spoiling it.]

SHRIVELLED WHEAT FOR SEED.—There were some things in last year's Cultivator that puzzled me; Mr. Johnston stated that shrivelled wheat produced as good a crop, and as plump; this coming from such good authority I am bound to believe it, as I have no proof to the contrary; but I think you always recommend your readers to sow the best. Last year I had some shrivelled white and some very plump. I washed out the plump and put it into a pickle of salt and water that swam an egg, and skimmed off the small grains of chess, &c., and dried it with lime. I lost money by this, and intend to sell the plump and sow the shrivelled in future. J. J. C. Indiana.

Cattle Stalls.

"What is the most approved method of securing cattle in stalls?" P. P. PECKHAM. *Bradford Co., Pa.*

As we frequently meet with inquiries like this, it may be useful to some of our readers, to explain a few modes somewhat in detail.

The stalls vary in construction according to the method adopted for fastening the cattle. As a general rule, the more liberty the animal has for moving about, the more care is required for littering, and vice versa. When every animal is separated from the others, each in its stall, and by a gate, no other fastening is employed. The stalls in this case need not be more than three and a half feet wide, so that animals of ordinary size will not turn about in them; but as they may pass backward and forward, plenty of litter will be required, to maintain proper cleanliness. Where cows are large, the width should be greater. The entire length should be about 14 feet—at least two feet for the manger, 7 feet for the cow (very large will need 8 ft.) one foot for the manure gutter, and about 3 feet for clearing away manure, passing for milking, &c. When gates are used for separating the animals, they may either extend the whole length from the manger to the rear of the stable, or what is rather better only a part of the way, the remainder being occupied with partitions between the animals. The gates all swing one way, the outer one is opened first, and the occupant of the first stall marches out, and so on successively, till the whole stable is vacated. When they return, a reversed order is observed, the inner one being secured first, and so on. Fig. 2, represents the position of these gates when open, and Fig. 1, as shut. This is the usual way in which such



gates are made to work, but a neater and much more convenient way is to have these gates run on rollers on an iron bar overhead, and the attendant standing in the feeding alley at the heads of the animals, opens and closes their gates by an iron hook on the end of a stick about the size of a rake handle, without leaving the alley. A still better way, never before published, is shown in Fig. 3, where the gates, made of three light bars, are hung

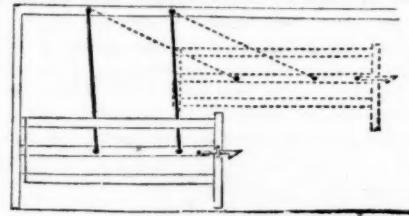


Fig. 3.

by two iron rods to the scantling cross-beam overhead which separates each stall, and they are opened as already stated by the hook from the feeding alley in front of the animals, and are secured by the simple wooden latch, shown in Fig. 4. When the animals take their places, these latches are successively raised, and the gates returned to their places. A double bar forms the top of the gate, between which the suspending-rods play and are thus kept firmly to their places.

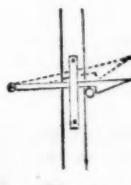


Fig. 4.

They shut in between two upright studs, and are thus more firmly held to their position, and are not likely to be crowded against or broken, as in the case of hinges. Another advantage of this mode is, that any one of the gates may at any time be opened, and two or more stalls be thrown into one for a cow about to calve, or for any other purpose.

Another mode of securing cows, frequently adopted, quite comfortable for the animal, but attended with some labor in fastening and loosening, is the sliding halter, shown in Fig. 5. The stake or post on which it slides is slightly inclined, to give more room in lying down, and is placed just without the manger. An iron ring or chain loop, sliding easily, encloses the stake, and a smooth chain, attached to this, passes around the neck of the animal, and is fastened by a broad-tongued

hook, which is put into any link forming a proper size for the neck, and cannot come out until turned edge-wise by the hand. A strap and buckle is sometimes used for the same purpose, but is less durable.

A third mode of securing the animal is by stanchions. Unlike the preceding, these prevent the animal from bending its head to its sides. Each one consists of two upright stakes or strips of plank, placed just far enough apart for the neck to move up and down freely, but not allowing the escape of the head. One of the strips is movable at the top so as to slide open wide enough to admit the head of the animal, when it is returned to its place, and secured by a pin—its upper end sliding between two bars of wood. Cows are quickly secured to their places by this contrivance, and it has one important advantage over the other modes already described, by not allowing them to step backward beyond a certain line nor to lie down on their droppings—for this reason less care is required in littering them. In a large milk establishment, where nearly a hundred cows were kept, the owner had all the movable stakes of these stanchions secured to a long rod, by which every cow was released by a single movement of the hand; and when they returned to their places and began eating their messes, a like movement fastened every one.

In all cases where cows are secured at the head, the partitions between the stalls should extend backwards from the manger about five feet, and to admit the free circulation of air, should not be more than four feet high. These partitions may be made thus: Set a post of cedar or other durable wood firmly into the ground to form the rear of the division, *a*, Fig. 6; this has a

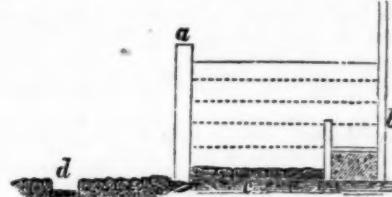


Fig. 6.

groove chiseled into it, to receive the partition plank; another groove for the other end is made in a stud at the back of manger, *b*. To prevent the decay of these plank, they should rest on curb-stone, *c*, set into the ground. The floor on which the fore feet stand, and on

which the animals must kneel in lying down and rising, should be compact earth, well covered with straw, so as to be soft and comfortable. The hinder portion of the floor should be paved, or flagged with very thick solid flag-stones. A gutter, *d*, for the manure should be formed of smooth flag-stones, with curb-stones on each side, so that it may be just wide enough for a common square shovel to work in, and by which it may be easily and effectually cleaned. This gutter may be made of plank, but this soon decays. Stalls are often made seven feet wide, each for two animals, a stout post only being placed midway between them, Fig. 7. This has the



Fig. 7.

advantage of securing more circulation of air, and of more room for cleaning.

The manger should be at least two feet wide, and if intended to hold roots, meal, &c., should be a foot higher at the bottom than the animals' feet. If only for hay, it may extend down to the floor, the feeding being given in movable tubs holding each about five gallons, which have the advantage of being easily and thoroughly cleaned for each successive meal,—cattle, as well as animals of a higher order, not liking to eat from dirty vessels.

Model Dairy Farm and Barn.

Mr. J. E. PITTIT of Fabius, N. Y., is characterized as "a pioneer in the onward march of dairying," by a correspondent of the *Saturday Evening Post*, (Philadelphia,) who furnishes that journal with an account of his operations, from which we gather the items below:

The farm was formerly carried off "under a mixed system of tillage and sheep husbandry—the major part of the farm consisting of hillsides too steep, and swamps too low for the plow." Mr. P. seeing the poor policy of tilling such a surface, determined upon fitting the farm for dairying, and it is interesting to note the means employed. By a thorough practice of ridge-plowing, under-draining and trenching, he has rendered many acres of swampy and low clay lands, highly productive of grass and roots for stock. On the more bleak and exposed ridges of the hills, after giving the soil a deep, fine pulverization, he has set an orchard, now of vigorous and hardy growth, a breastwork against the wind and sun, and retaining the snow in winter, thus preventing the winter-killing effects of frost and exposure, and yielding valuable fruit, which, aside from other purposes, is unequalled as food for cows in the production of milk. Gypsum, stable manure, and other fertilizing materials, are used with telling effect on the remaining slopes.

The barn, 60 by 80 feet in size, has a basement 10 feet deep, with a bottom of solid rock. The posts of the frame-work above, are 20 feet in height, with a roof of good proportion still higher. A bridge, the sides of which are built of quarry stone, and the intervening space, except that occupied by an ice-house, filled in with refuse cobble stones, leads up to the front door above the basement. A broad alley extends through the barn to a large door on the opposite end, where there is another bridge of slight declension, the

whole width of the barn, leading to higher land in the rear. This bridge is for the passage of cows and teams—the alley for teams to pass through in hauling hay and other feed. On each side of the central alley, extending about 60 feet from the rear end, are two tiers of stanchions for cows, in front of which are rows of troughs for feeding the cows, which stand on either side, heading towards each other, with a space between for the reception of hay and fodder. Each cow along the tier occupies three feet—so there is room for eighty, the number usually kept on the place. The hay is drawn in at the center alley, and thrown overhead, where is space for two hundred tons—a supply sufficient for the winter's use.

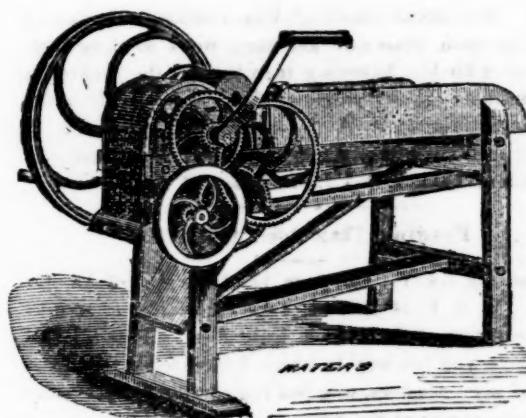
At milking time in summer the stables are opened; in ten minutes all the cows have marched to their places, and are drinking whey from the troughs; a man fastens them there as fast as he can walk along, by closing up one side of the stanchion, which is caught and held by a drop latch. Eight milkers are employed—each cow as soon as milked is set at liberty—and in an hour's time the whole are finished, and the milk is all in a large vat in an apartment at the right of the front entrance on the same floor, where it has been received from a tube, connected with a straining pail stationed on the milking side of the division wall. When the cows are all gone, the floors are immediately cleaned with shovel, broom, and water, until every particle of the cows' droppings has disappeared through a trap-door into the basement. This, Mr. Pettit says, is his California, and the saying is comparatively true, for the liquid manure which comprises two-thirds the value of the whole, and is usually wasted, is saved by draining into a large cistern, from which it is pumped and carted away when desired. A sewer is in process of construction for conducting it down a grade for about twenty rods, where it is to be deposited in a large vat, from which it can be drawn off by a faucet into a waggon tank when needed. The solid manure may be got away in winter or summer, when most convenient. A free use of gypsum, lime, and other deodorizers, not only adds to its value, but prevents the escape of ammonia or any nauseous stench into the air or other parts of the building.

The apartment mentioned above as receiving the milk, is some 15 by 25 feet in size, and is the "work room" in which the cheese is made. The great milk vat, for convenience, is run off to the center of the room on a railroad track. In one corner is a steam boiler, which is connected by a pipe with a chamber in the milk vat, where the steam is thrown to heat to any required degree for warming milk or cooking curd; a pipe also passes from the boiler through an aperture in the wall, to a tub for cooking roots and other feed.

Under this room, and of the same dimensions, is a room for the storage of roots, apples, and other feed which will not bear much frost. Water is brought here from a pure spring in the rear of the building, where it can be drawn with a faucet for washing roots; from this point pipes diverge, carrying it to almost every part of the building—one leads to the boiler, one to the sink for washing dairy utensils, another to a tub for wetting and mixing feed, another to a vat for watering cows, washing floors, &c., and still another follows along the chimney to the roof, to be used in case of fire. A room in the basement contains a cistern for the reception of whey, to which it is carried in a pipe from the vat where the cheese is made, and from which it is pumped daily for the cows.

The whole work of cheese making is performed in the building—the cheese curing house is situated a short distance away in an orchard. The whole routine is characterized by neatness and order, and the product is held in high estimation wherever known.

REMEMBER.—Five dollars will pay for three copies of the *COUNTRY GENTLEMAN* one year, or for one copy three years, if sent strictly in advance.



Hickok's Stalk Cutter and Grinder.

We present above an engraving of this cutter, of which the following is a hastily written description. It is quite similar in its cutting arrangement, to the long and well-known Sinclair stalk cutter, being connected with a heavy shaft crosswise the feeding hopper, on which are fixed heads or arms at each side of the mouth, and on these heads or arms are bolted four knives, which are of cylindrical form, corresponding to the whole diameter of the cylinder. The knives are so formed as to present a spiral edge, and in revolving they produce a shears cut against a dead knife at the mouth of the hopper. On either end of this shaft is fixed a crank and balance-wheel, and the latter being flat, answers for the band pulley when driven by horse power. There is a pair of feeding rollers, driven by gears—the rollers being flexible to accommodate themselves to a large or small amount in the hopper.

In addition to this, and which forms the most novel feature in the whole, Mr. Hickok has combined a pair of his well-known cider-mill grating cylinders, which receive the mass as it falls from the knives, and passing between these rollers, it becomes finely pulverized or ground all at one and the same operation. This combination of the grater promises to become a desirable acquisition. Like most new machines, we are informed that this has in some parts not proved sufficiently substantial to withstand the hard use when driven by horse power; but this defect will of course be remedied, if it has not already been, and the machine although manufactured for use by hand, will of course accomplish still more by the application of higher power. It is pretty hard work for one man to turn, but if furnished with a double crank, two men would have no difficulty in operating it all day.

Corn-Huskers.

A truly valuable corn-husker is yet to be invented. We have recently made a trial of the one which received the first premium at the State Fair at Syracuse, doing the work personally, so as to be sure of accuracy, and using a watch as a test of time. Placing the stalks upon a barn floor, we found no material difference between the work of the machine and that of the fingers; either, by activity, would husk about five bushels of ears an hour, of the common eight-rowed yellow corn. By the machine, however, (which separates the cob with a stroke of a knife, and shoots the ear out sidewise,) the corn was scattered over the floor, and the stalks from which it was cut, were left in a confused heap. Portions of the ear were likewise occasionally left attached to the stalk, as it is difficult to hit the exact point of separation. Placed upon the earth instead of upon a floor, the operation of the machine would not be quite so satisfactory. We tried the experiment of first jerking the ears unhusked from the stalks and afterwards using the ma-

chine, but lost time on the whole, although each could be done with more expedition separately. There are some who are unskillful in husking with the hands, who doubtless would do more by the assistance of the machine; and there are others again, possessing much manual skill, who would work more rapidly without it, much time being lost in placing each ear separately in its place for the blow of the knife. A corn-husking machine of the right sort, must be either held in the hand, so as to be instantly applied to each ear, or else the husking must be done by horse-power in a wholesale manner, without the care and labor of handling every ear separately.

Chinese Sugar Cane Molasses.

EDS CO GENT.—Presuming that you would like to hear of the success of any of your subscribers in any farming operations, I will send you my experience in raising Chinese Sugar Cane this year, and manufacturing the same into molasses, with a bill of the items.

Last spring I selected one and a half acres of land, (a dry sandy ridge,) which was planted to corn last year, and yielded about twenty bushels of corn per acre. I drew on to it twenty good loads of manure for one team to haul, and spread it over the ground, after which I plowed it once, and marked it off one way four feet apart, and planted the hills two and a half feet apart in the rows. I plowed it three times with a double shovel plow, and hoed it once only. It grew well, suckered much, and I allowed them all to grow.

In the fall, owing to being disappointed in getting my mill, (a two roller iron one,) I did not commence making molasses until the first of November, about which time commenced a long rainy spell, which lasted until after the middle of Dec., and as I had to work up the cane out of doors, I lost considerable by being delayed until after a number of hard frosts, and a consequent depreciation of the quantity and quality of the juice, proved as follows:

The first half acre worked up, yielded 100 gallons of molasses. The other acre also yielded 100 gallons—half as much as the first per acre, and the cane grew very evenly all over the ground. That the juice deteriorated, is proved by this: at first 16 gallons of juice made two gallons of molasses, and at last 16 gallons of juice would make no more than five quarts of molasses, but the quality of the molasses when made was unchanged, and was pronounced by all who tasted it, to be the best they ever saw—far preferable to Orleans molasses.

I am satisfied that if I had got my mill so as to have worked up the whole field in season, as I did the first half acre, I shold have had about three hundred gallons, but I am very well satisfied as it is. My molasses sold readily at 60 cents per gallon. Below I give you a bill of the debt and credit:

	Dr.
To 1½ acres of land,	\$3.00
" Manure,	5.00
" plowing,	1.50
" marking,	50
" planting,	1.50
" plowing three times,	4.50
" hoeing once,	2.00
" blading, topping, and cutting,	15.00
" hauling and piling,	5.00
" grinding and boiling,	30.00
" wood—6 cords,	12.00
 Total,	 \$80.00
By 200 gallons molasses at 60c..	\$120.00
By cane seed, 40 bushels, at 37½c..	15.00
By cane leaves,	5.00
 Total,	 \$140.00
Deduct,	80.00
 Balance,	 \$60.00
A. A. COLE. White Co., Ind.	

7th Ann. Meeting U. S. Ag. Society.

The United States Agricultural Society met at Washington, Jan. 12th, the President, TENCH TILGHMAN, in the chair. After calling the roll of States to ascertain the names of delegates and members from each, Mr. T. proceeded to the delivery of his Annual Address,—referring to the change in the management of the Society when its presidency passed into his hands; to its present office in Washington, and its Monthly Bulletin; proposing that the Secretary should henceforward give his whole time to its affairs; alluding at length to the exhibition at Richmond and its results, the objects of the Society, and the publication of its Transactions; complaining that no mention is made of the U. S. Ag. Society in the Patent Office Report, where some facts are collated in regard to State and district organizations of the kind, while a lack of courtesy is thought to have been also manifested by that department in other ways; recounting the history of the Society; regretting that it has as yet received no aid from Government, although an act of incorporation is now before Congress; noticing the death of Hon. Moses Newell, one of its officers, during the year, and closing with a favorable mention of the Fund collecting for the purchase of Mount Vernon.

The Treasurer, B. B. FRENCH, then followed with his report, showing the present resources of the Society to be \$2,109.41, of which only \$417.41 is in his hands, the remainder being a balance due from the Virginia Central Ag. Society.

The Constitution was so amended on motion of HENRY WAGER of New-York, as to include on the Executive Committee of the Society, its ex-presidents for five years after their occupancy of the office. The Secretary's Report was then read. On motion of WILLIAM KELLY of New-York, after some discussion, a nominating committee was appointed. It was stated in reply to an inquiry from JOHN JONES of Delaware, that the committee appointed two years ago to memorialize Congress on the subject of an Agricultural Department, had not urged the matter, and after an extended debate upon the subject, it was finally laid on the table. On motion of H. S. OLcott, the President's Address was referred to a Committee, when the Chair announced that the subject of Agricultural Education was in order, and a series of resolutions in favor of the Morrill Land Bill having been passed, an address was listened to from Prof. CARY of Ohio, and after some further discussion, the CHAIR announced the standing committee on nominations, as follows:

Wm. Kelly, N. Y.; E. Holmes, Me.; F. Smyth, N. H.; E. P. Walton, Vt.; W. P. Wilson, Mass.; G. H. Penfield, Conn.; J. Jones, Del.; Gen. Kimmell, Md.; Benjamin O. Tayloe, D. C.; W. H. Spence, Va.; H. K. Burgwin, N. C.; Hon. B. Fitzpatrick, Ala.; W. L. Underwood, Ky.; F. G. Carey, Ohio; D. P. Curtis, Wis.; D. P. Hallaway, Ind.; Mr. Barret, Mo.; Legrand Byington, Iowa; Mr. Brown, Nebraska; W. T. M. Arney, Kansas; Sylvester Mowrey, Arizona.

The morning of the second day was spent mainly in discussing the whereabouts of the next exhibition, the claims to which of some point in the Mississippi Valley were quite strongly advocated, and an application was presented from Peoria, Ill. Cincinnati, Pittsburgh, and Indianapolis were also suggested.

We have received no further account of the doings of the meeting, excepting that contained in a dispatch by telegraph to the New-York Herald, which states that Gen. TILGHMAN was re-elected President, and Messrs. FRENCH and POORE respectively Treasury and Secre-

tary. The usual board of Vice-Presidents, including one for each State and Territory, was also chosen, together with the following members of the Executive Committee: Henry Wager of New-York; J. McGowen of Pennsylvania; J. W. Ware of Virginia; F. Smyth of New-Hampshire; J. Merryman of Maryland; H. Capron of Illinois, and J. M. Cannon of Iowa.

Feeding Flax-Seed to Cattle.

EDS. CO. GENT.—On page 17 of No. 1, Vol 13, Co. Gent., W. R. C. of Illinois, asks "how flax-seed may be profitably fed to stock instead of oil-meal?" I will give you the way in which I have fed it, (and also one of my ancestors, who fed it quite liberally,) which I should prefer at the price to oil-meal.

His rule was to mix one bushel of flax-seed with three bushels of oats, and get it ground; by so doing, any miller can grind it. Be particular to have it ground fine; then mix with other meal as desired, and feed to fatting stock, I should consider it very valuable.

I have fed it to calves with success, by getting fine ship-stuff and mixing with the oat and flax-seed meal in equal quantities—that is, to three of oats, one of flax-seed, and four of ship-stuff, and mixing thoroughly after the oats and flax-seed had been ground together. Perhaps some one will give a better way of preparation without the grinding. I think it a valuable feed as prepared above, for any kind of stock, including horses and sheep. Of late years I have not been able to get much of the seed in this vicinity at any price. JONATHAN TALCOTT. Rome, N. Y.

Potatoes in New-Jersey.

MESSRS. EDITORS—On page 331 of volume 12 of the Co. Gent., I notice a communication from N., of Salem county, in which he offers what he calls a sweeping assertion, "that Salem and Cumberland counties in this state, are two of the best, if not the very best in the United States, for producing that valuable esculent, (the potato,) in its perfection." A little further on he says, "as Paris means France," &c., and leaves us to fill up the comparison by supposing that Salem county means all New-Jersey. To show you that there are a few potatoes raised in other counties of New-Jersey, besides the two above mentioned, I copy from Prof. Geo. H. Cook's Report on the Geology and Agricultural Resources of the Southern Division of the State, the number of bushels of potatoes raised in those two counties, and also the number raised in Monmouth and Burlington, respectively, in the years 1840 and 1850.

	1840—No. of bush.	1850—No. of bush.
Salem,.....	70,644	248,315
Cumberland,	31,851	137,313
Monmouth,.....	273,280	813,849
Burlington,.....	193,126	412,143

I think it quite probable that *some* of the potatoes quoted or mentioned in the New-York Tribune as "Jersey," came from counties farther north than either Salem or Cumberland, especially when we consider that they lay nearer that market. I suppose the preference given to Jersey potatoes, is owing to the fact that marl is almost the only manure used in raising them, for it is a very common opinion that potatoes raised here from marl, are much better for eating than those we raise from heating manures. But with regard to the Peachblows, as they are a very late growing variety, and require all the season to mature, it may be that our longer season gives them an advantage in this particular; and for this reason I think it likely that they will be found to succeed first rate further south. G. H. New-Jersey.

Centrifugal Friction Regulator.

We have been furnished by MESSRS. EMERY BROTHERS, of the ALBANY AG'L WORKS, with the annexed cuts and description of a new and efficient contrivance to control the velocity of Horse Powers, especially those on the ENDLESS CHAIN principle—as well as for regulating a great variety of machinery, whether driven by HORSE, WATER OR WIND POWER.

It is necessary that such an instrument should have the attributes of regulating the velocity and being adjustable to any speed desired, and at the same time be simple in its mechanism and operation, sure in its effects, and readily applied to any machine desired. From the lack of such control over machinery serious accidents have happened, while by its aid a uniform velocity may be obtained, and in many kinds of work the services of one attendant may be dispensed with, whose business would otherwise be to attend the brake.

The invention represented in the accompanying cuts is only about six inches in diameter, complete in itself, and weighs but eight or nine pounds.

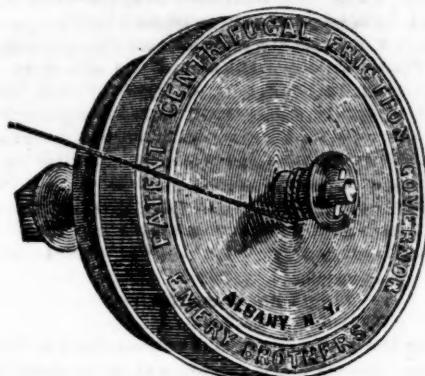


fig. 1

Fig. 1 represents the instrument complete ready for use. The cord as seen, is extended to a brake wherever desirable. In operation the cord is wound around the spindle as it is turned by the Regulator and draws upon the brake, producing the requisite friction upon the machinery. The Stem with nut and screw extending from the back serves to attach the instrument in position to anything permanent, and also extends through the whole instrument and receives a pin in its outer end to hold the several parts together. In using it on the Endless Chain Power, it is attached to its side and directly back of the band wheel.

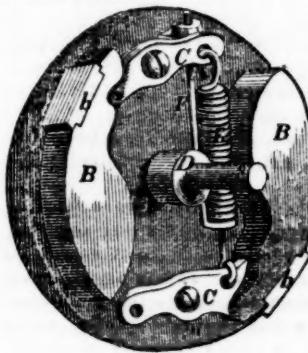


fig. 2

Upon the face of this disc are hung two iron weights B. B., by their pivots C. C. The longer ends and greatest weight being one side of the pivots towards the letters B. B., while the short and lightest ends are connected by a spiral spring E, which spring by nuts and screws is adjustable to any degree of velocity required.

To put it in operation—attach a round band to some part of the machinery to be regulated, as round the main shaft of a horse power and then round the sheave of the instrument, which will give motion to the disc, which in turn carries the weights, producing in the latter a centrifugal force which causes the long and heavy ends of the

weights to extend outward from their stationary position with more or less force, according to the velocity.

On noticing the weights B. B., there will be seen small wood blocks or shoes b. b.

The front plate is shown in Fig. 1, with a long hub forms a spool outside, on which the cord is attached and wound. This plate has also a flange around its outer edge which extends back nearly to the disc and when in place completely encloses the weights B. B. This front plate being free to turn on its axis revolves either way or remains stationary as the case may be.

Therefore, when the spring E. is set for any given velocity, the weights will maintain their position, but with any increase of speed beyond what is desired, the disc carrying the weights B. B. gives them increased centrifugal force and moves them outward until the wood shoes come in contact with the inside of the flange of the front plate, and by their friction upon this flange and the front plate with its spool, it is readily turned, winding the cord and operating the brake.

As soon as this excess of velocity is reduced by the brake or the work which is being done, the weights recede from the flange, allowing the front plate to turn backward, thereby loosening the cord and brake. For further information, see advertisement in another column, of MESSRS. Emery Brothers, of the Albany Agricultural Works, who we learn have secured the right of the Patentee, Mr. Lee Pusey, of Delaware, for the manufacture and sale of them. The prices are from ten to twelve dollars.

Feeding and Value of Cornstalks.

MESSRS. EDITORS—Allow me to add my testimony in favor of the value of cornstalks, and also *corn buts*, which I consider the best of the two, for milch cows. I run all my corn buts and stalks through a Macomber's Patent Cutting Machine, which I think is the best machine for cutting corn fodder by hand power, as it cuts, jams and splits the large stalks and buts into *splinters* instead of *little blocks*, so that the cows eat every part except a few hard joints and some few pieces that do not get jammed and split. I had rather cut up the buts than dig them out of the manure cellar in the spring after the pigs have worked them into a tangled condition as old farmer Gordias did the Gordian knot.

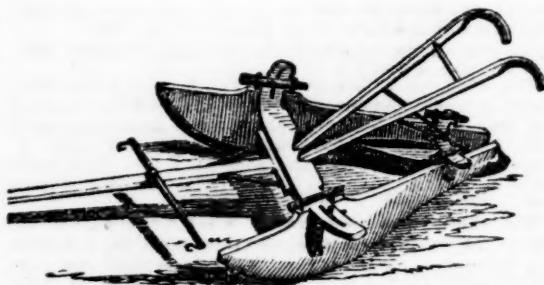
As to their value for feeding, I think they stand at the head of the list of dry fodder, that cows generally get for their *winter diet* in this part of New England, for cows, like a good many other mammals, do not get all the good things they deserve. One of my cows, an old farrow one that has given milk for nearly four years, gives only three quarts per day, but so rich that six quarts of it made one and a half pounds of butter, and this after she had been kept a month on cut corn buts, as much as she would eat, and one peck of turnips per day, and nothing else except what water she wanted.

My cows eat the *cut buts* greedily, while they will only strip off the leaves of those that have not been cut. A. CHANDLER. Concord, N. H.

To Destroy Live-Forever.

EDITORS CO. GENT.—Having twice seen in your paper the inquiry, how to kill the plant commonly known as *Live-Forever*, I give my experience. As its name indicates, it is very tenacious of life. It can hardly be dried to death. I have put branches without roots, on the top of a flat rock, in the spring, and seen the same alive in the fall. Consequently the ordinary way of hoeing it up and leaving it to die in the sun, as is common with most weeds, will not answer for this. I have tried that way to no purpose. Then, in tilling the land, I adopted the opposite plan, and took pains to draw all parts of the plant together into the bottom of some furrow or other hollow place. All served in that manner were killed. And working on this principle, in a few years the whole field was cleared of it. The labor is less than might be expected, for it does not spread all over the ground, but grows in bunches or patches, and I suppose could be disposed of quite fast, by digging it up and drawing it into some hollow, and then draw on dirt till covered a few inches deep, which would be the last of it. E. MERRITT. Paletting, N. Y.

LATE PEACHES—The Californian Farmer of Nov. 5, acknowledges the receipt of a box of peaches, from L. E. Miller of Placer county. They were from a seedling raised by Mr. M.—of a rich golden color, above medium size, a freestone, and of fine flavor.



Share's Potato Covering and Hoeing Machine,
For covering potatoes and hoeing them the first time on any kind of land. The wings contract and expand to suit any width rows, and can be set to any slant so as to work any depth desired. A piece of sheet iron passes over the rows to level them down, leaving them in a more workmanlike condition than can be done with the common hoe.

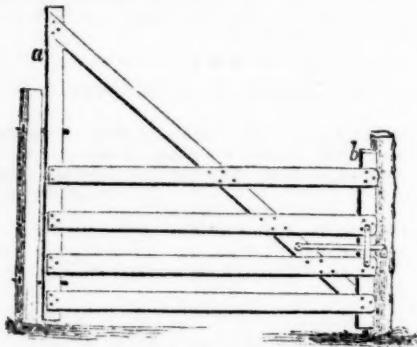
Farm Gate.

I have observed in the *COUNTRY GENTLEMAN*, a variety of plans of farm gates, all possessing more or less merit, and all aiming at that most prominent one convenience. Now I look upon a farm without gates as behind the age, and would almost as soon think of building a house without a door, as attempt to manage a farm without a gate at every point where frequent passage to and from enclosures is necessary.

But many farmers who are intelligent on all other subjects involved in farming, appear to come to a dead halt when a gate is to be made, and employ a mechanic to plan and erect them at an unnecessary expense, many of which soon get out of order and become perfect nuisances.

The three qualities in a farm gate, where ornament is not to be a prominent feature, are convenience, cheapness and durability.

The following plan, which I have adopted on my farm, appears to me to combine these qualities. The simplicity is such that any farmer with skill enough to hold a plow can make such a gate, at an expense of not more than one dollar.



Let the farmer provide himself with two pieces of pine or poplar scantling, 3 by 3 inches, one about 12 feet long, and the other 5½ or 6 feet long, *a. b.*; lay them down on a level surface, and upon these, with 12d nails, nail the slats or bars, composed of inch pine boards, and from 6 to 10 inches wide, with such width of spaces between them as he may deem best. Then with a board 6 or 8 inches wide, make a brace extending from the top of the long post to the bottom of the short one, nailing it firmly to the long post, and to the bars where it intersects. These arrangements, as also the latch, &c., will be seen in the figure above. Then select ground posts of some durable timber, (I use black locust,) set them 3 to 3½ feet in the ground, and

hang the gate as shown, with gudgeon hinges, with nut and screw at the end, (any blacksmith can make them;) incline the ground post to which the gate is hung, sufficiently to cause the gate to shut and latch by its own weight. Place a log of wood between the ground posts, fitting it closely and bedding it in the earth even with the surface, to keep the posts from sagging together. A gate of this kind is light and substantial, and will last for years without repairs. Farmers try one of these gates; it will cost but a trifle, and at the end of one, five or ten years, report through the "Country Gentleman" the result of your trial. W. C. PINKHAM. Loveland, Clermont Co., O.



The Gazelle.

Among the rare and curious animals kept at Spring-side, none attracts more attention than a pair of beautiful Gazelle, imported from the Island of Malta last summer. They are smaller, more delicate in their limbs, more gentle and less timid than the deer. Their hoofs are cloven like the sheep; horns of the male hollow, curiously curved, annulated with prominent rings or spirals, long tapering to a sharp point, and not deciduous. In the female the horns are not so long but more delicate, straight and sharp pointed. They are of a brownish yellow on the back, and white on the belly and rump, as shown in the figure above, which we take from Wood's *Natural History*, published by the Messrs. Harper. Their ears are beautiful, well placed, and terminating in a point. Its eyes are very large, dark and lustrous, and yet so meek that the oriental poets love to compare the eyes of the Gazelle to those of their mistresses. The epithet *gazelle-eyed*, is considered the highest compliment that a lover can pay. Its size is less than the domestic goat, which in some respects it resembles. They are from twenty to twenty-four inches in height, well and symmetrically proportioned.

"The Gazelle is for the most part more delicately formed than even the Roebuck; its hair is as short, but finer and more glossy. In swiftness it equals, if not surpasses the roe, running and springing with vast bounds, and leaping with surprising elasticity. It frequently stops for a moment in the midst of its course to gaze on its pursuers, and then resumes its flight. They bound with swiftness, and are generally so shy that dogs or men vainly attempt to pursue them. With an ease and safety they traverse those precipices which to every other quadruped are quite impracticable; nor can some of them be overtaken by any animal but the winged tribe. Accordingly in those countries where the fleetest are chiefly found, they are pursued by falcons, and this singular manner of hunting forms one of the principal amusements of the higher ranks of people all over the east."

Inquiries and Answers.

[Particular attention is invited to this column, for which Inquiries on all subjects within the scope of this Journal, are solicited. While we shall continue to reply to such of them as circumstances will permit, we ask our readers to furnish any facts or experience which they may possess, in answer to the queries here proposed, whether we respond to them ourselves or not.]

EXPERIMENTS WITH SEED-WHEAT.—I had some old wheat lying in the chaff which I intended to sow, but having once sown old rye that one-tenth of the grain did not vegetate, I thought I would try a little of it in the yard. It had some weevil in it, and I put it in strong brine and skinned off all that swam, and sowed three places with 50 grains each. In the 1st, 25; 2d, 26, and 3d, 20 seed only came up, or 71 out of 150; this was plump wheat. I had some also white, that was sown late in October, after the potatoes were dug; it rusted and was badly shrivelled; I saw no weevil in it—44 out of 50 came up, and it looks as strong and healthy as the other. I tried some old Mediterranean; I saw no weevil in it—44 grains came up out of 50. I tried some new plump white—48 grains came from 50. Now I would thank you to tell me how the weevil gets into the grain—is the egg in it, as the egg of the pea-bug in the pea? In what condition of the wheat is it most favorable for the weevil? Is it when it is taken in from the field soon after cutting, or standing long after cutting? Is there any means of preventing it from hatching when wheat is kept through the summer after it was grown? Why was there no weevil in the shrivelled white and Mediterranean? JOHN J. CRAIG. North Madison, Ia. [If by the term *weevil*, our correspondent means the wheat midge, we can briefly inform him that the fly or perfect insect lays its eggs in the ear about the time it is fully headed out or is in the *milk*—these soon hatch and destroy the grain. The mischief is generally done before cutting. Mediterranean wheat is usually exempt from its attacks. The term *weevil* is very indefinite, applying to a class of beetles, of which Harris says there are 4,000 described; while the wheat midge is a gnat or fly.]

COLORED FRUIT ENGRAVINGS.—Have you got, or do you know where I can get colored engravings of fruits for nurserymen's use? What is the price of each? G. W. H. [Address D. M. DEWEY, Rochester, N. Y.]

THE BEST TIME TO SOW PEAS.—My practice has been, when I wished to get the greatest yield, to sow early—by the 1st of May; but when I wished them free from bugs, I have practiced later sowing, say about the 10th or 15th of June, with very good success, although at the expense of a considerably diminished yield. C. Niagara Co., N. Y.

FLAX-SEED AND OIL-CAKE.—I would be pleased to learn of JOHN JOHNSTON, or any of your numerous subscribers, how flax-seed may profitably be fed stock instead of oil-cake. Located as I am, with no oil-mill within 100 miles, and no oil-cake in the market, can flax-seed, at one dollar per bushel and corn 40 cents, be fed profitably? Is there any practical method for feeding the seed whole and making it pay? W. C. R. Ill. [We are not prepared to answer this question very definitely. Broken or ground flax-seed has been sometimes used instead of oil-cake. As it contains much more oil than the cake, and this oil is as purging as castor-oil when separate, it is best not to feed it very largely in this way, but to mix it freely with other meal. It is considered best to soak it in water a few days. Six days will answer if in cold water, in which case there should be six tubs, one for each day successively. Two days are enough for warm water. Some who have thus experimented consider a bushel of flax-seed or fifty pounds equal to 100 lbs. of oil-cake. If this be the case, then flax-seed at one dollar per bushel would be equal to oil-cake at twenty dollars per ton, deducting however the

labor of grinding and preparing it. Others have not perceived so much in favor of the flax-seed. We should much question the propriety of feeding it whole, but the experiment is easily tried, and it would be interesting to hear the result, if accurately obtained.]

MANURING LIGHT SOILS.—I like your paper first rate, and would like to see a few hints as to the best way of managing a farm composed of 30 acres of light sandy loam. As my farm is on high land, and composed of a light sandy loam, the advice about draining, using peat, muck, &c., does not reach my case, as these materials are not at my command; would that they were. I cannot satisfy myself as to what is the best way to enrich my farm; yet it must be done somehow to make it pay. Am at present using the manure from one horse, six cows, three hogs, and forty fowls, mixed with half loam. O. P. W. Plymouth, Mass. [The application of the compost, so far as it goes, is a good one—the greater the amount of clay in the loam used for the compost the better, both because it is the best absorber of the enriching parts of the manure, and because it tends to give strength to the soil. We would recommend as an additional means of enriching the land, the practice of plowing in frequently green crops, and especially of clover. It often happens that this proves much the cheapest mode of manuring, obviating the cost of heavy cartage. The addition of some lime, ashes or marl (shell or earthy) in connection with other fertilizers will probably be useful.]

FREEZING TILE.—What is the consequence, if tile when laid for under-draining should freeze solid in the earth? Would it destroy the tile or materially injure them, provided they were good hard burned tile? I have contracted for the making on my farm of one hundred thousand tile the coming season. I have Stephens' Book of the Farm, and Munn's Practical Land Drainer, but neither of them enlighten me on the subject. I will be compelled, in some localities, to place tile on account of rock, not more than two feet deep. WM. C. RICHARDS. [Well made tile would be uninjured if frozen, unless full of water, in which case the freezing of the water would split them. Our correspondent may have observed that pieces of pottery or stone-ware lying on the ground and frozen when wet, have been uninjured—tile, if of as good material, will remain similarly unaffected. Two feet in depth places tile beyond the reach of frost, except far to the north; the chief evil of such shallow drains, is inefficiency in draining the soil to much distance, and in a liability to become gradually filled after the lapse of many years, in consequence of the muddy surface water not being sufficiently filtered before it gets down, and hence it carries down and deposits in the tile minute portions of earth, which finally obstruct it.]

FRACTURE IN A CALF'S LEG.—Is there any remedy for a fracture of the near fore arm of a calf two years old, or must I lose it? The fracture is very near the shoulder-blade, and difficult to find. Would slinging and binding the part be a practicable method? S. P. NICHOLSON. Mercer Co., N. J. [Fracture in the limb of a calf is not of difficult cure—indeed instances are not unfrequent where they have recovered with very little treatment. If the above mentioned calf could have had the leg bound properly to its place at once, and kept there, it would doubtless soon recover—if kept displaced, its recovery will be much slower, and probably quite uncertain.]

SHADE FOR ANIMALS.—Mr. Dickinson stated that sheep and cattle did better without shade trees, as the "lazy rascals lay under the trees all day when they should have been feeding;" of the truth of this I am sceptical, as I find that when my sheep have no shade trees they lie in shade of fences, and I find every other person's sheep doing the same. We must have a hotter sun here, or our sheep must be different in the feeling, or Mr. Dickinson's sheep must be like the Irishman in hanging, "got used to it." Another correspondent says his cattle do better without either water or shade in the pasture;

that when they come home at night they take a good drink. If he had water in the pasture he would find the cattle would drink before night, and then too. J. J. C. Indiana. [A tree is a most beautiful object, and it adds greatly to the picturesque appearance of a farm to see fine shade trees scattered over it; but careful measured experiment has shown that cattle do not thrive so rapidly in summer, nor cows make so many pounds of butter, where they have the privilege of lying under the trees, where a portion at least of their time is occupied in fighting, switching and kicking flies. With sheep, the case is undoubtedly different, as they will always creep under fences when they desire, but cattle cannot.]

ASHES AND BONE.—I understand that bone-dust and ashes are a good compost for potatoes, to be applied in the hill; but I do not know the proportions. Please inform me in THE CULTIVATOR, and oblige ANDREW SHELTON. Newtown, Ct. [There is no necessary connection between bone-dust and ashes, and they may be applied together or separately. Several hundred pounds of bone-dust are commonly applied per acre. There appears to be no definite rule for ashes, the quantity varying from ten to a hundred bushels or more. Both of these manures are usually of some, but not striking benefit, and often they are of no sensible advantage.]

WATER EXCLUDED BY CEMENT.—Please inform me through THE CULTIVATOR, whether hydraulic cement will answer as well for keeping water out of a cellar or cistern, as it does for keeping it in. Last summer I built a milk-house, five feet of which was under ground, and walled up with brick, the balance above ground. In time of much rain the water rises in it over two feet; it has consequently so far proved of no value. I bought hydraulic cement last fall, but have not used it, as I was afraid it would not answer. W. R. Fairfield, Iowa [Hydraulic cement, if good, and with good sand, will exclude water from a cellar by plastering the walls and bottom, as well as to keep it in cisterns. It often happens that several successive coats are needed before every crack is stopped—sometimes a thick wash, applied with a brush, will close small leaks. The cellar must not be allowed to freeze, or it may crack off the coating.]

MAKING TILE.—What kind of earth is used for making tile? how are they burned or baked? What is the weight of a tile machine? Is it an article that requires housing, or is it so constructed as to protect itself sufficiently from the weather? L. F. D. [The same kind of earth is used that is employed for making good tough brick, and they are burned in the same way. A tile-machine weighs several hundred pounds, the precise weight we cannot give—it should be kept housed from the weather.]

WHEAT DRILLS.—Can you recommend a wheat drill that will work in stumpy fields? Will drilling prevent freezing out? V. Meadow Bluff, Va. [We know of no wheat drill that will work well unless the ground is mellow enough and broad enough between stumps to admit its free passage. Drilling, by burying the seed uniformly at a good depth, tends to prevent the young plants being thrown out on soils which heave by frost.]

KNITTING MACHINE.—Can you inform me what a knitting machine costs, and where they can be procured? A. M. Belvidere, Ill. [The only knitting machine we have examined, is Goffe's patent, and this we have not seen in operation. If we are correctly informed, it is sold by Downs & Co. of Seneca Falls, N. Y. A hand-machine for family use is sold for \$35, and is claimed to knit a pair of half hose in ten minutes, or hose in 15 or 20 minutes. Those run by steam or water are more costly.]

DIOSCOREA BATATAS.—Will you or some of your correspondents, be kind enough to inform me how to cultivate the Chinese Yam. I have now two years growth from the small tubers, and shall I continue to plant them whole, or cut them up? E. IRA DOLE. Roxbury, Mass. [Will some of our correspondents who have had full ex-

perience, please answer? On account of the labor to dig the roots from the ground, each one requiring an excavation not unlike a post-hole, we never gave sufficient attention to the culture of this plant to become familiar with the details.]

BRICK AND TILE MACHINE.—I should like to know whether a brick-making and tile-making machine, combined, is made in this country, and by whom, and for what price—the moulds only of course for brick or for tile being different. J. H. McH. [We know of no such combined machine.]

HUNGARIAN GRASS SEED.—I want to know where I can get the Hungarian grass seed, and what it will cost per bushel—and how much should be sown per acre, and at what time it should be sown. R. HEDGES. Pickaway Co., O. [You can probably procure the seed at the seed-stores in Cincinnati, at about \$2 per bushel. As to the amount of seed to be sown per acre, and the best time to sow it, we shall be glad to hear from some of our readers who have grown it.]

GRASS-SEED FOR LAWN.—I desire to procure the seed of the Kentucky Blue grass, to sown a lawn shaded with native oak trees. Can you inform me where it can be had? Or if you should know of any preferable grass for shaded lawns, I should be much obliged for the information. D. H. S. Salem, N. C. [In some localities, particularly at the west, the Kentucky blue grass forms a fine lawn; but in many others, its greenness does not continue sufficiently through the season. In such cases, a mixture with it of red-top, white clover, and some of the English lawn grasses may be advantageous. The Orchard grass grows uncommonly well in the shade of trees, but is too coarse for a fine lawn. We cannot speak confidently for North Carolina, but have no doubt a mixture would be better than a single sort.]

APPLES.—Is the High-Top and Tallman Sweeting one and the same apple? They are cultivated here as such. JAREB CASE. Bradford Co., Pa. [The High-Top and Tallman Sweeting are distinct varieties. The former is an upright-growing summer fruit; the latter a spreading winter sort.]

SMITHSONIAN INSTITUTION.—Is there no way in which I could procure the "Transactions of the Smithsonian Institution," and what would be their probable cost, provided they could be got? We are informed that there has been nine volumes of "Smithsonian Contributions to Knowledge" published, yet I have never seen a single copy. If this great institution is designed to diffuse knowledge among mankind, surely there must be some way in which it can reach those that wish to receive it. H. GRIFFING. Shorb, Ill. [Will the Secretary of the Institution please answer the above?]

PEACH TREES.—Will you, or some of your numerous readers, inform me through THE CULTIVATOR, how the branches of peach trees should be tied in order to bring the fruit sooner to maturity? ROBERT KELSO. Wash. Co., Ill. [We have never known the peach to be treated in this way nor for this object. The branches of some fruit trees, more particularly the pear, have been bent downwards to make them bear while young, but not to mature earlier, but this practice is now generally discarded.]

OIL FOR MACHINERY.—Will you please to inform me which is the best kind of oil to use on machinery? Is sperm oil the same as lamp oil? If not, what is the difference? C. PECK. [The best sperm oil is generally preferred, although it is said the Breckenridge lubricating oil is as good or better. Common lamp oil is more impure than the best sperm, foreign matters being thrown in to make it cheap.]

RATS.—Will not some of your correspondents who have had experience in the matter, disclose some safe and sure, or at least good way to destroy or drive away rats. A great deal is written and very properly too, to demonstrate the best methods of making the manufacture of honey profitable: might not considerable at least

be said to show how to defend ourselves against the intrusion of those vermin that probably *destroy* far more for the inhabitants of the United States than the bees ever *made*? Let us have an investigation, "conducted without regard to the feelings of the rats." A. G. E. *Cardington, O.*

APPLES FOR OHIO.—Will you please give me a short list of the principal apples suited for this latitude, 39°, for market purposes in the various seasons. Hill lands, sandy soil, on clay subsoil, on sand-stone. Natural woods, black and white oaks, hickory, locust, white walnut, and hazel. *Jackson Co., O.* [Where the soil is good and suited to orchards, the following sorts have succeeded in the region indicated:—Rome Beauty, Prior's Red, Maiden's Blush (autumn), Fallawater, White Pippin, Yellow Bellflower, Willow Twig.]

VETCHES OR TARES.—Have vetches ever been cultivated in this country? They are highly esteemed in Ireland, and if valuable here, I thought of importing some of the seed. Will your correspondents please reply? w.

Experiences of an Octogenarian

Wheat, Corn, Barley and Potato Culture—Deep and Shallow Plowing, &c.

MESSRS. EDITORS—I saw in the Co. *GENT.*, a call to your readers to write for you. I thought I would try my old trembling hand, to communicate some incidents that have occurred in the experience of an old farmer, who is more than four score years old.

My experience in raising winter wheat has been various. When the land was new and strong, we could raise winter wheat if sown any time before the snow beat us off, but those were the customs of by-gone days. For many years past we have made it our practice to sow our fall wheat by the first week in September, commonly after peas, or barley. Our practice is to plow the ground once well, four or five inches deep; harrow it well; then sow the seed, two and a half bushels to the acre; then harrow it both ways and roll it with a heavy roller. In this way we get from 18 to 30 bushels of wheat per acre; but if pestiferous weeds are troublesome in the land, we think it best to summer fallow to clean the land. Our spring wheat we commonly sow after hoed crops, such as corn or potatoes, and cultivate as for winter wheat, and get about the same quantity of grain per acre.

Barley if sown after corn or potatoes, and well cultivated, in a good season, will turn out from 30 to 40, and we have got 60 bushels to the acre. Sow two and a half bushels to the acre.

Oats, treated the same as barley, will turn from 40 to 70 or 80 bushels per acre.

Potatoes planted on good sward-land, well turned over to the depth of four or five inches, and well harrowed, and planted three feet each way without manure, used to turn out before the disease came among us from 200 to 300 bushels to the acre, if well cultivated. We cut our seed so as to take 10 or 12 bushels to the acre, putting two pieces in a hill.

In 1839 we planted about 20 acres in this way, and got about 6000 bushels. You may wonder what we did with so many, as we have no regular market very near. I will tell you; as was fashionable in those days, we sold them to a distiller near by, to make whiskey of, excepting what we wanted for our own use, at 16 cents per bushel; but we made use of a good many at home, as we fattened 36 hogs and made them average over 300 lbs a piece.

With regard to the culture of Indian Corn, I should differ perhaps from many with regard to deep plowing. On my land, experience has taught me that four or

five inches deep is much better than deeper. In 1853, we turned over 16 acres of meadow sward, the most of it rich and good. As our plowman was a farmer, I did not attend to him until he had plowed about one half of it, and the best of it too, when I found he had plowed it full nine inches deep. I must confess I was somewhat chagrined to see the work so done. I told him to let down his wheel and take up his traces so as not to plow more than four or five inches deep. He did so, and I must tell you we had much the best corn on the shallow plowing, though much the poorest land. The deep plowed land turned about 30 bushels of corn to the acre, when it ought to have turned 80, while the shallow plowed turned more than 50 on an average. I planted one acre of the shallow plowed and cultivated it with my own hands—planted three feet each way with six grains in each hill, on the 25th, 26th and 27th of May. My acre was eight rods by twenty, I planted a row of potatoes on every side, then planted white beans between the hills of corn.—At the first hoeing, I thinned out to four stalks in the hill, I hoed twice, and when I took off my crop you could not get your hat full of everything on the ground, excepting what was designed to grow. I got from my acre 124 bushels of ears of sound, eight-rowed yellow corn, four bushels of beans, and ten and a half bushels of potatoes. Potatoes were badly diseased that year—corn sold for 75 cents—beans for \$1.50, and potatoes for 50 cents per bushel—fodder \$6—so you may see the produce of my acre was \$63.75. My grandson sowed spring wheat on my acre the next spring, and got 29½ bushels.

If anybody will show to me the philosophy of turning up cold and dead earth in which there is no fertility, to put our seed upon, they will show to me a new mode of reasoning. More than twenty years ago, I plowed up ten acres of pasture land for corn; a portion of it rested on lime rock, not more than three or four inches below the surface, the plow turning up all the soil down to the rock, leaving the naked rock in the bottom of the furrow for rods together; in some places there was scant soil enough to hoe the corn with, but I got a good piece of corn, yielding more than fifty bushels to the acre, without any manure. I have often traced corn-roots to a great distance horizontally, but never found them to run very deep; they occupy the warm and fertile soil in preference to the cold and dead sub-soil. For example take off five or six inches of the top of the soil on ten feet square, and plant a hill of corn in the center, and you will have a poor hill of corn, but you may put a half bushel of good dung in the hill and mix it well with the sub-soil, and you may get a good hill of corn. And this reasoning will hold good anywhere. We don't have manure to make a twenty acre lot rich two feet, or even one foot deep; if we plow deeper than the fertile parts of the soil we injure the crops, unless we have manure to make the ground rich. I speak with regard to my own land; other lands may require different cultivation.

I have been in the practice of under-draining to some extent, and have found it very beneficial on some of my land, both in drying the land and the use of the water in my barn-yards.

I have done but little in the nursery or horticultural business, more than for my own use. In the fall of 1846 I planted about three rods square of land with Apple and Pear seeds. I have sold hundreds of trees from it, besides setting out an orchard for myself, which is now bearing finely.

I don't understand the mysteries of bee-keeping, but I have kept bees more than forty years in succession from the same stocks, and have not had them run out, realizing quite an amount of profit from them, though seldom ever wintering more than ten or twelve stocks. You may call this good luck if you please; and I have had always the good luck never to have chess among my wheat, except when I have sowed it.

OLIVER BABCOCK. Babcock Hill, N. Y.

Notes for the Month.

A FINE HORTICULTURAL PRESENT FOR NEW YEAR.—We are indebted to the extensive conservatories of the Manor House,—through the hands of Gen. VAN RENSSELAER himself—for a fine lot of Lettuce and Asparagus during the Holiday week. We hope ere long to make our readers participants in the pleasure arising from the admirable Horticultural improvements into which our Patron has entered with such spirit for a few years past, by giving an account of them in the Co. GENT. as soon as time will possibly permit. They are entitled to rank among the best in the country, and we have the evidence of our own recent experience to support us in all we can say of the perfection and abundance of their productions.

AGRICULTURAL MEETING AT WASHINGTON CITY.—An Agricultural Convention, consisting of gentlemen specially invited by the Commissioner of the Patent Office, commenced its session in the Patent Office Building, Washington city, on the 4th of Jan. The meeting was organized by calling MARSHALL P. WILDER to the chair, and appointing B. PERLEY MOORE, Secretary. There were 44 persons present, representing 19 States and 4 Territories. The Agricultural interests of the State of New-York were represented by Wm. Lawton, Esq., Col. C. C. Morrell, and Rev. A. Brown. After some discussion, the meeting decided that it should hereafter be designated as "*The Advisory Board of Agriculture of the Patent Office.*"

We had expected a full account of the proceedings of this meeting, from a special correspondent, in season for this paper; but he writes us on the 6th, that it will not close its labors before Saturday evening, and he thinks it best to defer his letter until he can give a connected and full account of the matter, together with the result of their doings.

We are pleased to learn that J. H. KLIPPART, Esq., Secretary of the Ohio State Board of Agriculture, is preparing for publication in a separate form, the very full and excellent Essay on Wheat contained in his last report. It is the result of careful and untiring investigation, which, although conducted with especial reference to this crop, its varieties, growth, &c., in Ohio, cannot but be of much service also to the farmers of other States.

UNDERDRAINING.—"It will pay." So says J. R. WALKER of Springfield, Vt., in the *N. E. Farmer*. He had a piece of cold, wet land, containing a little less than four acres, the average product of which has been two loads of poor sour hay and brakes, hardly worth cutting. It was underdrained 3½ feet deep, using stone, and the next spring it was found dry, ready to work early in the season, and with 25 cart-loads of barn-yard manure per acre it was fitted for corn and planted the middle of May. The crop was 440 bushels of ears, all merchantable corn—worth, in the opinion of the neighbors, more than the previous products for fifteen years, and paying well the whole expense of the improvement. Such will be the result in many thousand instances, would farmers more generally enter upon this work.

NORTH-CAROLINA TEA.—A subscriber in Guilford Co., N. C., says: "Enclosed you will find a specimen of a kind of tea that we have used in our family for many years. I find that its real worth is known by but very few people, although it grows in abundance on almost every farm in this section of the country. The manner of using it is the same as our common store tea, and takes about the same quantity. I am of the opinion that this tea could be cultivated in any section of the United States. Here it grows naturally, and any family can in one hour's time, procure enough to last them the whole year. I have never tried the experiment of propagating it, but am satisfied that it can very easily be done. It makes an article of tea that is very neat or quite equal to any that we can purchase." [We have

not tried the sample sent us, but should be glad to receive, when the season permits, a specimen of the plant itself, that we may determine its name and character.]

BUTTER AND CHEESE.—Franklin county in Northern Vermont, is one of the best Dairy counties in the United States. The *St Albans Messenger* furnishes us a statement of the amount of butter and cheese sent from that place by railroad, from which it appears that during the year 1858, 2,841,677 lbs. butter, and 1,306,370 lbs. cheese were forwarded from that place to market. The editor says:

The above statement is sufficiently explicit to give any one an idea of the importance of the dairy business to our county. It is proper to remark, however, that comparatively a small portion of this shipment came from Canada, and still less from Orleans county. Yet we deem it safe to challenge any county in New-England or New-York, to show that she sends to market more dairy produce than Franklin county.

As compared with the year previous, there is an increase of last year of 428,449 lbs. of butter, and 428,320 lbs. of cheese.

If we take the average price of butter at 18 cents per pound for the last year, and cheese at 7 cents, we have the following fat and solid figures: butter, \$511,501.86—cheese, \$91,445.90. Total, \$602,947.76!! How ridiculous to complain of hard times with this amount circulating in our midst.

SUGAR GROWER'S MEETING.—A meeting was held at Rockford, Ill., the second Wednesday in December, to further the interests and compare the experience of sugar and syrup makers, from the Chinese Sugar Cane. A fine exhibition of syrup was shown from different parts of Winnebago county. H. P. SLOAN, Esq., of Winnebago, the President—Messrs. Jos. Milner of Rockford, George C. Cleveland of Cherry Valley, S. Scott of Guilford, P. Simpson and A. H. Holmes of Rockford, and several others took part in the discussion, and many interesting facts were elicited, for which if possible we should be glad to make room. From a hasty perusal of the proceedings, we find no evidence of sugar making, however; but there appears to have been a general success in the production of a cheap and excellent syrup. The Rockford *Register* says the opinion

"we believe was uniform that the seed should be planted early and gathered before a hard frost. That it was not necessary to use alkali to clarify the syrup, if it were properly and thoroughly skinned, filtered, and strained. It was also decided that copper kettles were preferable to any other for boiling. The syrup of Mr. Scott was good evidence on this point, he having used no alkali or albumen, and his sample being by far the heaviest and best of any on exhibition. Iron machines were considered the best for crushing. On comparing notes, we think the best quality of syrup was produced on clay, or sandy loam."

CHAUTAUQUE COUNTY PREMIUM CROPS.—Premiums awarded on field crops, at the winter meeting of the Chautauque County Agricultural Society, held at Fredonia, Dec. 23, 1858.

Corn.

1. W. A. Mayborne—103 4-10 bushels of 56 lbs. per acre.
2. J. C. Bates—89 2-58 bushels of 58 lbs. per acre.
3. J. E. Griswold—76 45-58 bushels of 58 lbs. per acre.

Winter Wheat.

1. D. A. A. Nichols—33 289-1000 bushels of 60 lbs. per acre.
2. H. Hollister—35 bushels of 59 lbs. per acre.

Spring Wheat.

1. E. C. Bliss—24½ bushels of 60 lbs. per acre.
2. (Ruled out.)

Oats.

1. J. E. Griswold—50 bushels of 32 lbs. per acre.
2. do. do. 47½ bushels of 32 lbs. per acre.

Barley.

1. J. E. Griswold—48 bushels (4 rowed) 56 lbs. per acre.
2. do. do. 47½ bushels of 56 lbs. per acre.

Potatoes.

1. E. H. Darby—85½ bushels to the half acre.
2. (Ruled out.) n.

NEW WHEAT.—*Red Chaff Mediterranean.*—A correspondent of the *Ohio Cultivator*, says a new variety of wheat of this name, is attracting much attention in Chester Co., Pa. It was first noticed among the common Mediterranean, as taller, standing up better, and

the heads well-filled. A few heads were sown at first; it has now become quite common and much in favor with farmers. The writer sowed two bushels last fall beside some white wheat—the difference can be seen as far as the field can. Both were sown at the same time, but the new wheat looks as though sown a month earlier.

OUR AGRICULTURAL INTERESTS—THE "ADVISORY BOARD."—There seems to be some insuperable difficulty attending the proper representation of our Agricultural interests before the public. All of us, who have any perception of the relation of things, or who have watched the course of national legislation for years past, are convinced that there is no kind of avocation so incalculably important to the country, and yet so utterly disregarded for lack of combined action, and any vocal and responsible head, as is our Agriculture. And what is worse, the efforts made to effect its advancement, are often so misjudged as really to tend toward an opposite result. We fear very much that the Secretary of the Interior, or his advisers in the matter of the recent Agricultural Convention at Washington, have fallen into such an error. Agricultural men are at once prompted to a criticism of the selections that have been made to represent them, and in which they have had no voice; the very object of the meeting is, to say the least, liable to a different construction from that which it ostensibly wore; but, above all, the question of the right of any Secretary to convene at public expense such a body, is at once mooted. The danger is, that between the jealousy which is always felt when official prerogatives appear to have been strained, and the other causes of suspicion or mistrust that exist, the farmers will neither desire to accept the representative officers of the self-styled "Advisory Board," nor the advice it may offer, however good, carry with it enough of weight to affect in any degree the action of government, or enough of merit to silence public tokens of decided disapprobation. "Grant," say the papers, however justly, "grant the right of a Secretary to offer mileage and a per diem or other allowance to any board of "advisors" he may wish to convene from the different parts of the country. Shall we not, then, have under this pretext every kind of political abuse at once sanctioned and invited? What a new engine of political influence is thus invented! what a new placer discovered for the miners upon the public funds." It was our purpose now, merely to intimate the sort of reception which this action of the Ag. Department of the Patent Office is likely to meet with, and which, in fact, it has already received from various public journals. We await a farther knowledge of its proceedings, before permitting ourselves to enter upon farther comments.

BUTCHER'S SHED.—A correspondent at Catharine, Schuyler county, N. Y., gives us a description of a building he has erected for butchering, making soap, and boiling hog-feed, so that all these operations may be performed a little remote from other buildings. The building is ten feet square; a kettle holding four barrels is set in an arch, and a crane with ropes enables the workmen with little labor to swing the hog over the kettle for scalding, and when this is done to swing it back to the pole to hang up.

IN THE FIELD AGAIN.—We are pleased to learn that Mr. Chapman is again a breeder of Short-Horns, he having secured the entire herd of Thomas Richardson of West Farms, Westchester Co., N. Y. Most of this herd were imported by Mr. Richardson with his characteristic liberality, and without regard to expense. They count among their sires such bulls as Baron Warlaby (7813)—Crown Prince (10,087)—Hector (13,002)—Hopewell (10,332)—Royal Buck (10,750) &c., &c., all bulls of great celebrity both in England and this country. This herd is perhaps more deeply bred in the celebrated Boothe blood than any herd in this country, and as Mr. Boothe now refuses to sell any more male animals from his herd, they cannot at this time fail to be well appreciated. They are now all at the "Mount Pleasant

Farm," excepting Lady Constance, which will be sent out soon. Mr. Chapman will be pleased to show the herd to all persons who feel an interest in fine stock. *

DRAINING.—There is probably no one branch of improvement in which greater progress is being made on our farms, than that of draining. Many new tile machines have been put in operation during the past year, and a ready market, so far as we know, has been found for all the tile they could turn out. A correspondent in Bullitt Co., Ky., informs us that one of his neighbors has procured tile from an establishment near New Albany, Indiana, to be laid the coming season, and a gentleman from Indiana, who has visited our friend JOHN JOHNSON, to obtain personal information in relation to the operation and effects of draining, informs us that he has made a contract for 100,000 tile, all of which he hopes to have laid the next season.

A GOOD EXAMPLE.—Mr. CHARLES O. NEWTON, an enterprising merchant of Homer, Cortland Co., offers inducements to his customers, that should attract them in large numbers, while at the same time they are far different in kind from the ordinary style of chance gifts, and similar evasions of the State lottery laws. Mr. N. has recently purchased a quantity of our *Annual Register of Rural Affairs* for 1859, for presents, and we notice by the *Homer Republican*, that he offers both this, and yearly subscriptions to the Co. GENT. and CULTIVATOR, as Premiums upon purchases, at one time, of specified amounts. His sagacity we regard as fully proved by his extensive advertising, and we have no doubt the end will, in this instance, prove the excellence of his judgment.

SHEEP IN STEUBEN COUNTY.—A correspondent, who has examined some flocks in Wheeler, Steuben county, and particularly those of Gen. O. F. MARSHALL and Mr. JULIUS STICKNEY, writes that he thinks he can safely say that there are as good sheep in this town, as can be found in the State. They are Merinos, bred from the best flocks of Vermont and Connecticut.

FINE MUTTON.—Messrs. CHARLES & VAN METER had a beautiful display of mutton on exhibition at their admirably arranged stalls in the Center Market, last week. Among it was a carcass of Leicester mutton, sent by Mr. JOHN A. RICE, of the Anglo-American Hotel, Hamilton, C. W., to Gen. J. L. MITCHELL of Congress Hall, weighing 218 lbs.—a weight rarely reached by any breed of sheep. There were also fifty carcasses of yearling fine-wooled sheep, which we were told averaged 80 lbs. each.

CUTTING HAY, STRAW, &c.—A Vermont correspondent writes us as follows:—I have several times seen queries and suggestions in the "Country Gent." in regard to the policy or advantage of cutting fodder. Having been experimenting on a small scale for five years past, I conclude it a waste of labor and machinery to cut good, well cured hay for any animals who have good teeth and time to use them, so far as regards the nutritious properties or effects of the hay. The idea that because the excrement from cut hay is not so dry and hard, it is conclusive evidence that it has been better digested, I think not well founded, as I think any one will conclude from minute observation and examination; it is more moist simply, and that because more moist when taken into the stomach. I do not cut good hay for any

MULES vs. HORSES.—A writer in the *Genesee Farmer* says on the side of the first, that an average lot of two-year old mules will sell for as much or more than an average lot of three-year old colts. Mules require less food than horses; are less liable to disease and unsoundness, and live to a much greater age. The mule will perform more labor, according to size, at much less expense.

stock with good teeth, except I wish to give them meal or wish to bait them in a hurry—in either case, cut and wet the hay, and mix the meal with it. But for musty or inferior hay, straw, and stalks, I want a good hay-

cutter and a good root-cutter, and plenty of vegetables and India-wheat meal. R. N.

SEEDS.—I send you a few seeds of the California Citron, called by some the Apple-pie Melon—it grows large, and is excellent for preserves and pies. Also four seed of a French Citron—it also grows large and is much more like a pumpkin than a citron—good for pies. WILSON DENNIS. *Applebachville, Pa.* [What were the six large seed—an inch in length—enclosed in the same envelope?]

FRUIT GROWERS' SOCIETY OF WESTERN NEW-YORK.—At the meeting of this association, held at Rochester, Jan. 5, the following officers were elected:

President—B. HODGE of Buffalo.

Vice Presidents—J. J. Thomas, Union Springs; W. Brown Smith, Syracuse; Prof. W. R. Coppock, Buffalo. Secretaries—C. P. Bissell, Rochester; Jno. B. Eaton, Buffalo.

Treasurer—W. P. Townsend, Lockport.

Executive Committee—P. Barry, Rochester; J. J. Thomas, Union Springs; C. L. Hoag, Lockport; W. B. Smith, Syracuse; Joseph Frost, Rochester.

DIOSCOREA BATATAS.—The largest specimens of this root ever seen at the Mass. Fairs, were grown by Messrs. Hovey. They measured 23 inches in length, and were cooked (one boiled, the other roasted,) by the chairman of the committee on vegetables, who reported that "they were submitted to the taste of a company of amateur horticulturists, who were of the opinion that if they were ripe, there was nothing in them to recommend their superiority over the Irish or Sweet potato." So we supposed.

To CORRESPONDENTS.—Our thanks are due to our friends for favors received during the week ending

DEC. 27.—From J. W. C., H. L. T., L. H. Webb, H. R. Forster, A. Shelton, S. P. R., E. Sanders, E. Cornell, W. C. Pinkham, A. D. G., O. P. W., W. H. Sotham, H. S. Ramsdell, Suel Foster, J. Johnston, John J. Craig, W. S., W. C. Richards, Quien Sabe, W. L., C. L., A. A. B., Wm. Bacon, J. W. C., D. Wywick, G. B. H., Daniel Barker, J. H. H., C. N. Bement, D. S.

JAN. 3.—From D. S. Heffron, W. A. Sotham, R. R. S., L. Durand, D. Clizbe, Lockport, G. H., T. C. Peters, Mary D., John T. Andrew, J. W. S., S. Perley, W. H. Benson, E. Sanders, Columella, E. F. Peck, W. Chamberlain, W. A., C. B., F. K. Phoenix, E. R., A., C. E. Goodrich, Forrester, J. W., W. P. Jr., J. H. C., W. Steele, W. A., A. M.

JAN. 10.—From Cato, Columella, J. Case, E. L. H., E. J. Dole, W. C. Y., W. J. E., Mass., E. Aborn, B. J. H., R. Kelso, B. B., B. H. Mattison, S., J. W. C., A. Plantsman, Geo. R. Underhill, D. McCulloch, Wm. Gray, A. R. A., Observer, Elsie M. Emery, A. G. E., S., E. Cornell, C., M., S. E. Todd, Regina, T. V. M. K., Forrester, Daniel Parker, Mrs. Sarah S. Sockwell, E. S., W. R., Jas. Weed, D. G. Williams, E. S. B., A. A. Cole, Geo. Trowbridge, N., H. Hinkley, J. I. R., R. N., C. T. Alford, W., R. M. Conklin, C. L., W. E. Dodge, Hornellsville Farmer, L. A. Aspinwall, E. W., L. Smith, E. S.

JAN. 17.—J. Cope, S. M. Reynolds, Mellie, E. Merritt, Cato, A. Chandler, Simeon Abbott, J. Talcott, L. F. Dillaway, H. A., J. C. S., Levi Durand, S. B. Buckley, S. J. S., G. L., Prof. A. L. Kennedy, W., O. E. Wood, (see p. 28 last no.) J. A. K., Wm. Summers Sen., Forrester, G. W. B., W. C. S., Oliver Babcock, T. G. Yeomans, D. A. A. N., J. R. D., D. A. A. Nichols, W. D. Clark, W. P., H. Griffing, R. Hedges, Pastor, C. E. Goodrich, E. Schmidt, F. A. Nauts, Wm. Smith, J. Van Buren, W. J. Patch, J. Best, B. Willard, P. Henderson, Charles T. Jackson.

THE CULTIVATOR.—Readers are reminded that only Fifty-two Cents pays for THE CULTIVATOR and REGISTER both in Clubs of Ten, and that a copy of each is given to the club agent in addition.

The Barometer for Farmers.

A correspondent requests some remarks on the use of the barometer to farmers.

We have employed one for many years, and have often found it of great advantage. Farmers generally, it is true, may predict the character of the weather for some hours ahead, by their own observation of the sky and wind, but the barometer is an important auxiliary in this guessing. The rule is very a simple one:—If the mercury is rising, fair or settled weather is sure to follow—this we have never known to fail. If on the other hand, the barometer continues to sink, wind or rain will follow—rain, if in spring or summer, and wind in autumn or winter. It sometimes happens that a moderate sinking of the mercurial column will not be followed by rain; and at other times the rain has been known to commence simultaneously with its fall, and both go on together. But these occurrences are rather exceptions.

Sometimes the shrewdest guessing by observation has failed, while the indications of the barometer have been verified. In one instance, for example, there was every appearance of a fair day after a rain,—the clouds broke away, and the wind was "from the fair quarter of the sky." No farmer would have hesitated to begin cutting his hay, with a certain prospect of good hay-weather. But the barometer, singularly enough, began to sink—and shortly after rain came up, and a succession of showers continued during the day. In many other cases, the appearance of the clouds and the course of the wind, indicated rain, but the barometer remained unmoved, and no rain came. During the continuance of a long rain, it sometimes begins to rise, and as certainly shows the actual approach of fair weather, some hours before the rain ceases. During "unsettled" weather, its rapid sinking always correctly forebodes a storm.

We are told that in some localities, its indications are more uncertain, but we have as a general thing, found its use of much value. No doubt there are many instruments that are imperfectly constructed, and are consequently unreliable. Those furnished with a dial plate, are rarely as correct or sensible to changes, as the simple mercurial column. We greatly prefer the latter, and would not on any account procure the former. A good barometer may be bought for twelve dollars, sufficiently accurate for all ordinary purposes.

Oiling Harness.

I have noticed in Vol. 12, No. 4, directions for oiling harness; but as many who will likely take the present vol. may not see it, and as I have lately met with a process which was recommended by A. Baker, proprietor of the most extensive livery establishment in Rochester, I forward it for insertion. It is as follows:

Take Neat's Foot Oil and ivory or patent black—the latter well pulverised, or to be made so before using. Mix thoroughly, adding the black until the oil is well colored or quite black. In cool weather the oil should be warmed somewhat before mixing. With a sponge apply a light coat of the mixture—only what the leather will readily absorb, unless the harness is very dry, in which case a heavier coat may be necessary. After the harness is dry, wash thoroughly with soap suds. In making the suds use good Castile Soap and cold rain water. Warm water should never be used on harness leather. Apply the suds with a sponge. Rub off with buckskin. This will give your harness a nice glossy surface, and the leather will retain a good color and continue pliable for months. If it becomes soiled with mud or sweat, an application of soap and water, as above directed, (without oiling) will be sufficient to give it a bright appearance. Two applications of this oil and black mixture a year (or once every six months,) will be sufficient to keep the harness as ordinarily used, in good order. J. COPE. Westchester, Pa.

H A Y P R E S S E S —
New arrangement.—From and after this date, I will sell the castings, with right to build my Parallel Lever Hay Press, to any person wishing to build for himself or others. This Hay Press has been in use for five years, and its just celebrity has been earned by the **PERFECT AND SATISFACTORY** manner in which it has always operated. Finished Presses constantly on hand. The patent for some territory for sale. For particulars, address

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The price of these three machines is only \$35, all complete, and warranted, and farmers who want them are requested to make early application, as we could not supply the demand for them last spring. *Send for a Circular.*

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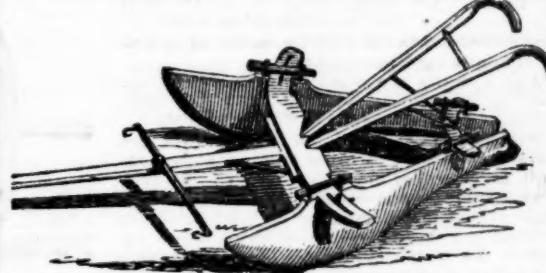
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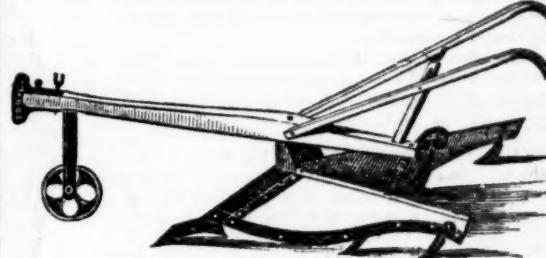
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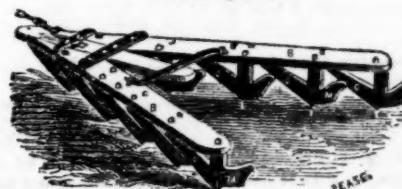
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Jan. 27—w&m1t

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So great has been the difficulty, as well as the tediousness of the operation, with even the best machines, (until recent improvements,) that farmers have been deterred from growing clover-seed for market, and even have purchased their own seed from distant sections of the country, where Water Power has been considered indispensable for the process—it being the practice of farmers for many miles around, to convey their clover chaff to such mills, generally paying seventy-five cents to one dollar per bushel, for having it milled, to say nothing of the loss of time and expense of going to and from the mills with it, to which should be added the waste of all the chaff, which is carried off by the stream, instead of going into the manure heap, and often with great loss of seed in addition.

The machine manufactured by **Messrs. EMERY BROTHERS**, of the **ALBANY AGRICULTURAL WORKS**, and illustrated at the head of this article, (fig. 1,) is claimed to be what every neighborhood, as well as every large farm, should have, and will increase the production of clover-seed, as the cotton gin did the cotton culture.

This machine is so simple, efficient and rapid in its operation, and so easily driven and operated by any person at all acquainted with the use of an ordinary threshing machine, that it commends itself to the careful attention of the farming community.

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Fig. 2 shows the cylinder, which is of the same dimensions as those used by some makers in threshing machines. This is entirely covered with iron bands, about one and a-quarter inches wide, and one-eighth inch thick, wound round and round spirally, covering evenly the whole cylinder. This iron covering is first cut up precisely like the coarse rasp used by blacksmiths in horse-shoeing, to file the hoofs. It is then case-hardened on one side, so every point or tooth is converted into steel, and of the hardest possible temper to stand and be durable.

Fig. 3 shows the inside of the concave, being entirely lined with the same material. This concave encloses about one-half the cylinder, and is adjustable by set screws, to any degree of distance from the cylinder. This machine, like the Grain threshers from the same establishment, is overshot, preventing thereby any hard substance getting into it to its injury. The chaff is agitated and fed into it by a revolving picker, extending lengthwise the hopper, just at the opening which receives the chaff, between the cylinder and concave.

This machine has already gained a very wide and favorable introduction, and is sold with a very broad warranty to give entire satisfaction, which it has done in every case where in use.

It is besides the cheapest machine, when the first cost, its capacity, and little power required to operate it, one horse being found sufficient to work out the seed from the chaff, from an acre of clover per hour on an average. The weight is but about five hundred pounds, and it occupies about three feet by six feet on the floor, and four feet high. The mills are all right and left handed, and deliver the seed and screenings on either or both sides, as desired by the operator.

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Fig. 1.

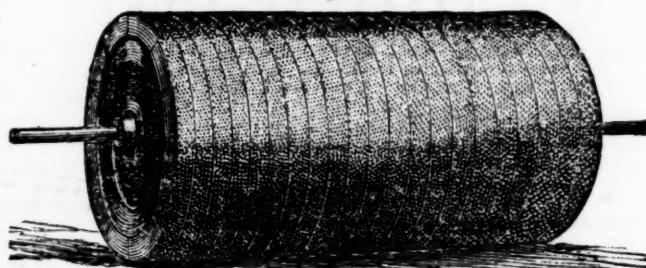


Fig. 2

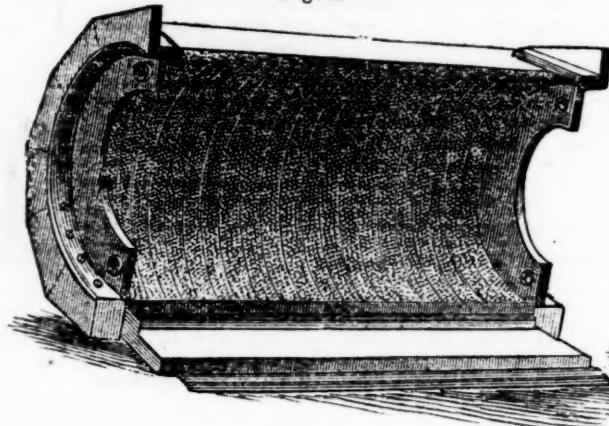


Fig. 3.

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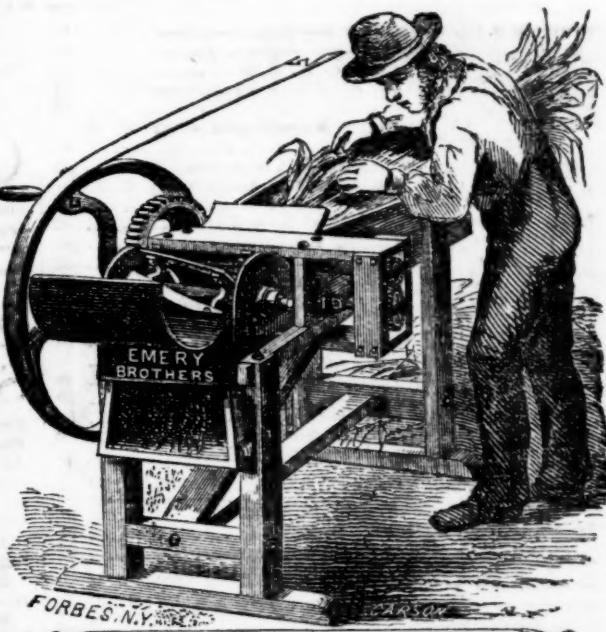
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The Power is simple and compact in construction, and readily understood by any one. It is not liable to get out of order, and can be worked with one, two, three or four horses.

The Threshers are of two sizes, numbers 1 and 2 suited to the power.

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